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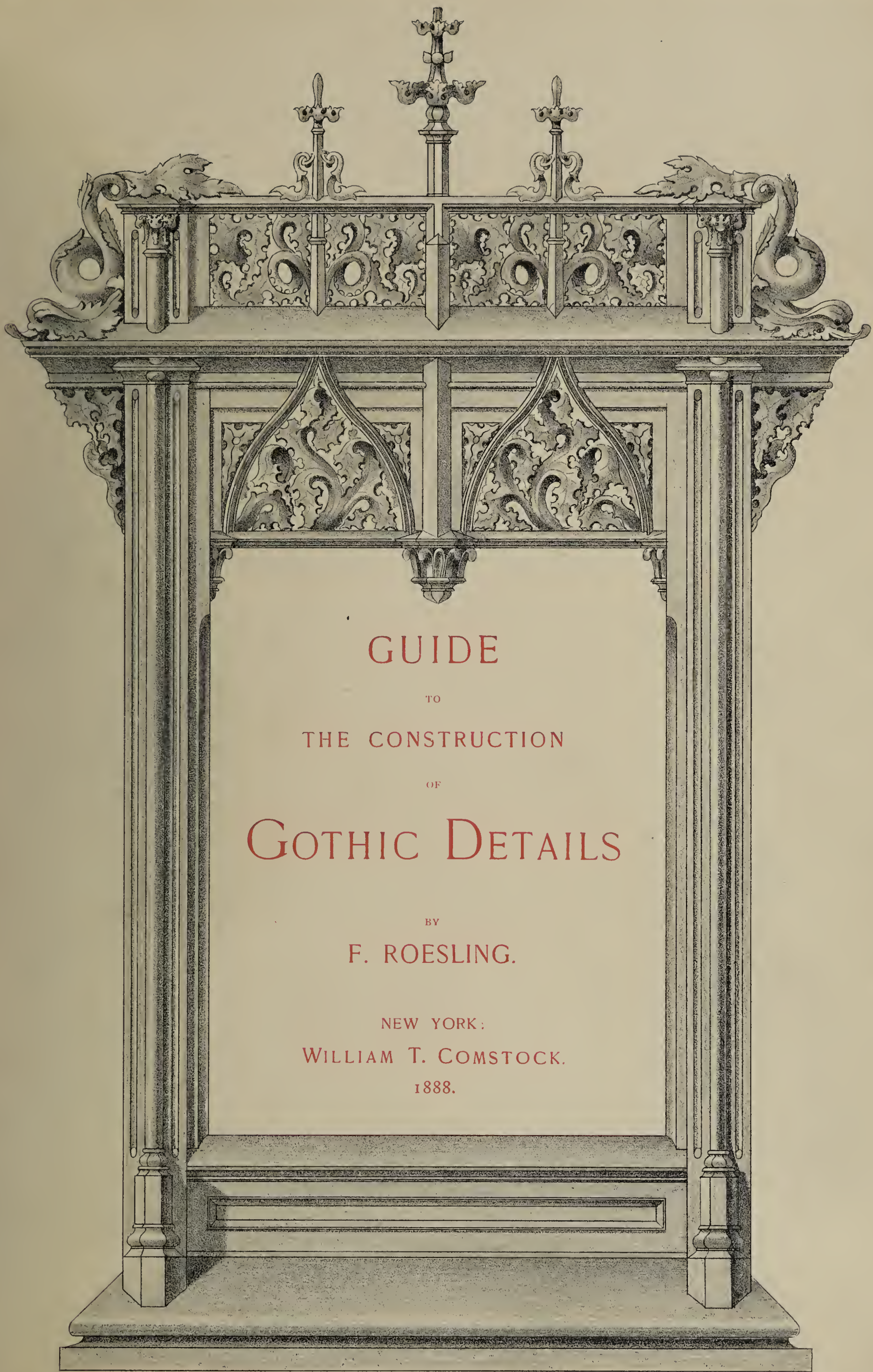
GOTHIC →  
→ DETAILS



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GUIDE  
TO  
THE CONSTRUCTION  
OF  
GOTHIC DETAILS

BY  
F. ROESLING.

NEW YORK:  
WILLIAM T. COMSTOCK.  
1888.



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# INTRODUCTION.

The object of this work is to show in a condensed form, by means of the following Plates, the construction of Gothic Details, and the development and character of the typical forms of the various periods in the Gothic Era.

Many details, found in ancient structures in other parts of the world, have been carefully and diligently examined; and the student who is not able to visit the grand ecclesiastical buildings erected by our ancestors will find much information in the adapted geometrical constructions which older and highly esteemed authors have studied and laid before us, to be applied wherever beauty, in conformity with economy and æsthetic taste, is desired.

To give an analysis of the development and system of Gothic Architecture, from the twelfth century to the period of the Renaissance, is not the motive of this work, and has not been attempted.

## On PLATE 1

*The characteristic form of arches represented are :*

**Figs. 2, 3, 4.—SEGMENT ARCHES**, in which the centers of the segments are located below the spring-line of the arch.

**Fig. 5.—SEMI-CIRCULAR ARCH**. Its center is found in spring-line of the arch.

**Figs. 6, 7, 8, 9.—POINTED SEGMENT ARCHES**, of which are represented in :

**Fig. 6.—THE TUDOR ARCH**, having four centers. Two of its centers are located in the spring-line; the two others are below, at the extremities of the span.

**Figs. 7, 8.—POINTED ARCHES**. Each arch is described from two centers, which are located below the spring-line, at the extremity of the span.

**Fig. 9.—DROP ARCH**. It is described from two centers located in the spring-line, with radii shorter than the span of the arch.

## On PLATE 2

*The arches represented are :*

**Fig. 1.—THE EQUILATERAL ARCH**. It is described from two centers, which are located in the spring-line at the extremity of the span of the arch.

**Fig. 2.—THE LANCET ARCH**. Described from two centers in the spring-line beyond the extremity of the span, at a distance equal to the diagonal of the width of the span.

**Fig. 3.—A LANCET ARCH**. It is described from two centers lying in the spring-line beyond the extremities of the span, at a distance equal to the width of the span.

**Figs. 5, 6, 7, 8.—THE OGEE, OR CONTRASTED ARCHES, AND THE FOILED ARCH**. These arches are described from three to five centers. See lines of construction with the centerpoints at their extremities.

For the sake of brevity, the line passing through springs of an arch is termed spring-line.

## PLATE 3

represents the division of the periphery of the circle, to enable the students to find, by mechanical construction, the length of sides of the trihedron, square, pentagon, hexagon, octagon and decagon, etc., as indicated and described.

## PLATE 4

represents ground plans and elevations of paneled piers, indicating construction of depth and mode of sinking of panels.

## PLATES 5 and 6

represent ground plans and elevations of bases, and paneled and truncated shafts, suitably applied to support, decorated work, etc.

## PLATES 7 and 8

represent mode of construction of from three to six foils, placed on the trihedron, square, pentagon and hexagon, with some application of designs, etc.

## PLATES 9, 10, 11, 12 and 13

represent the adoption of flowing tracery in Gothic art of later date. The student should be guided :

*First*—By the lightly drawn lines of construction, in order to establish the correct centers of circles and their segments, and to obtain the true nature of design;

*Next*—By constructing correct center lines, which are more distinctly seen than the lines of construction.

When the desired form of design has been obtained, then lay on or apply suitable moulding on the established center lines, in order to miter the adapted mouldings.

The rest of the Plates represent the application of the foregoing geometrical constructions, which give evidence that, by the adoption of the herein given geometrical lines of construction, an innumerable variety of Gothic designs can be produced, which, without difficulty, can be enlarged or diminished without the loss of proportion in the design.

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arch.

## PREFACE.

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In submitting to the building profession this compilation of "gothic details," the author desires to supply a long felt want, so that not alone architects, builders and draughtsmen, but also beginners and artisans in general can study the fundamental rules of the gothic style without much loss of time.

A rule of construction for every detail is given, which permits no modification of geometrical lines, for the historical value of this style strictly forbids any deviation from the geometrically and mathematically correct lines.

It requires only a brief study of the accompanying details of the gothic style to make various designs in a manner identical with that employed by our ancestors; and while many structures have been put up in the spirit of our present time, it is frequently necessary to apply such details which unite beauty, economy, as well as comfort, and every architect, builder and draughtsman, in enlarging or reducing forms of structures erected in former times, should not destroy the general character of such buildings, but should strictly adhere to the established rules of the gothic style.

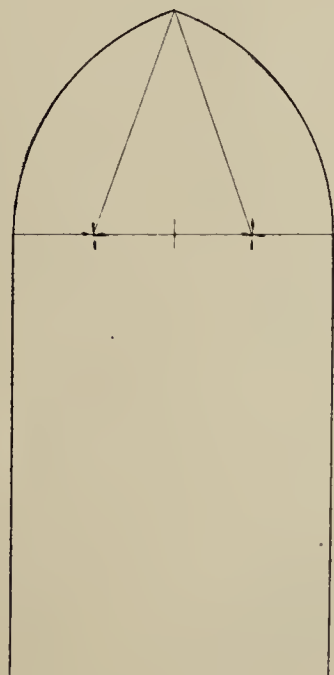
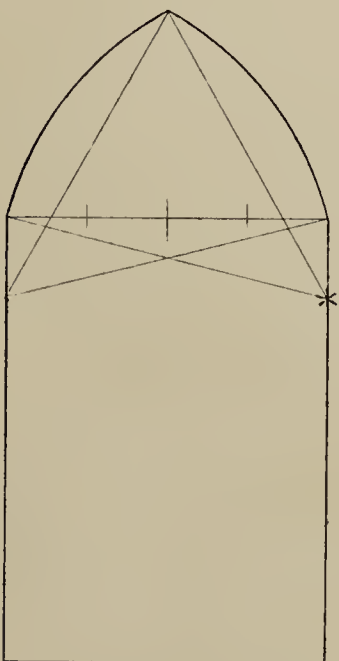
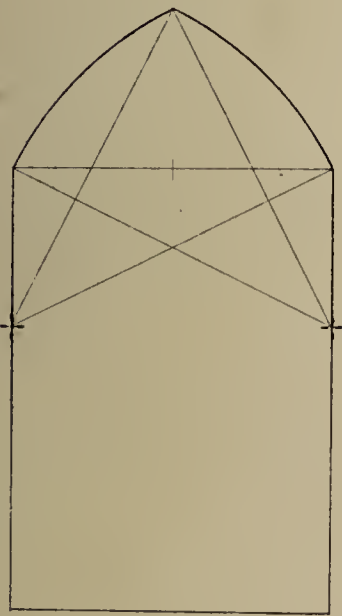
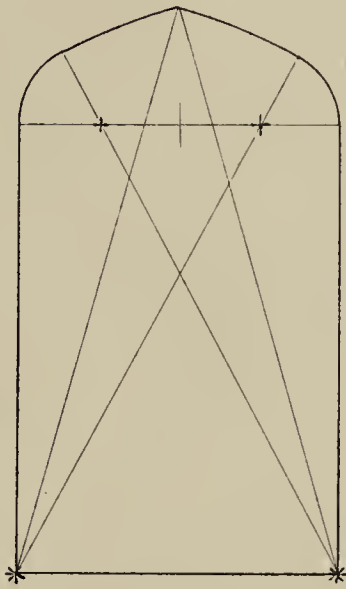
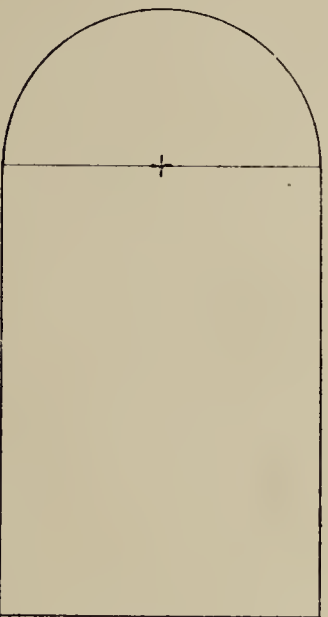
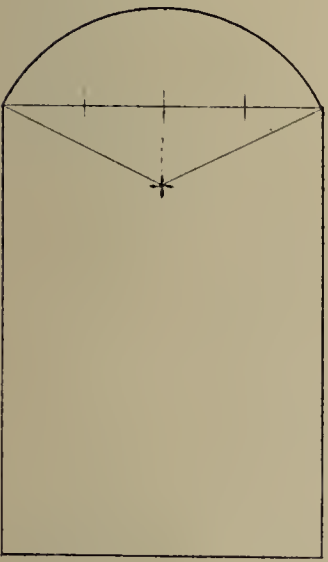
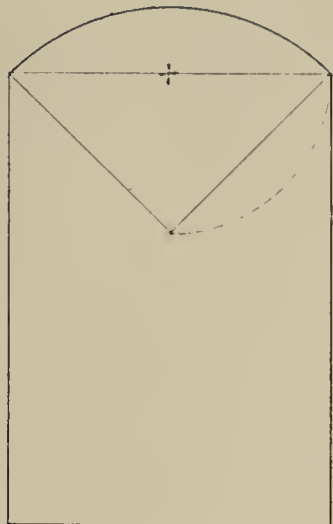
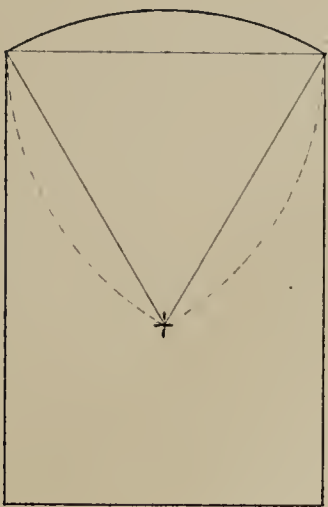
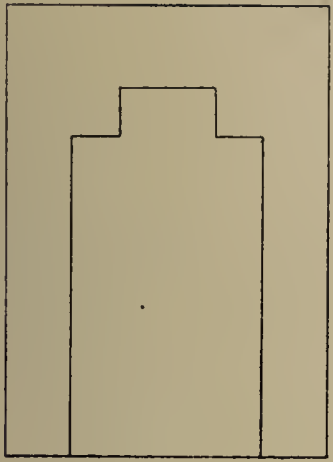
The details of construction herein given, it must be understood, are the productions of the genius of our ancestors, and they are herein reproduced, especially for enlarging or reducing the proportions, without running the risk of losing design or time in construing or carrying out the details.

THE AUTHOR.

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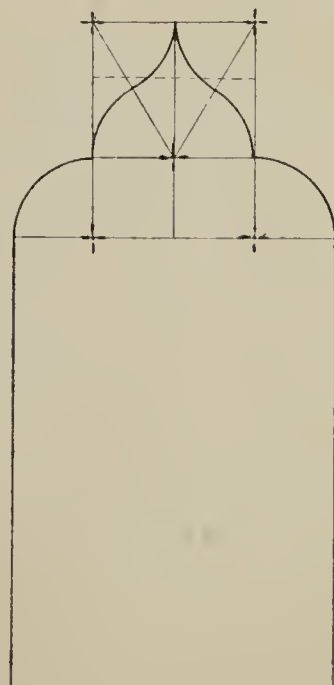
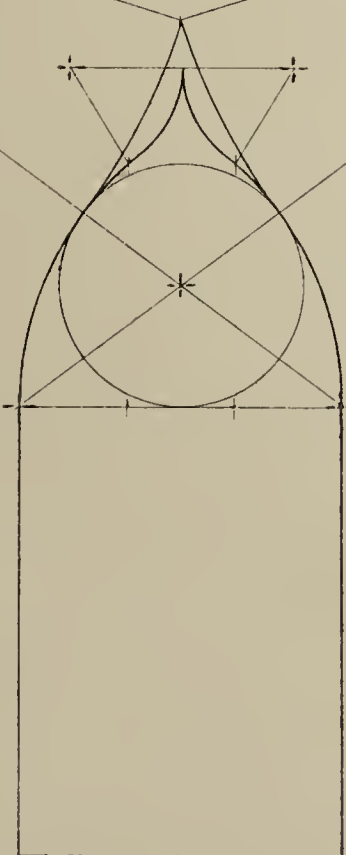
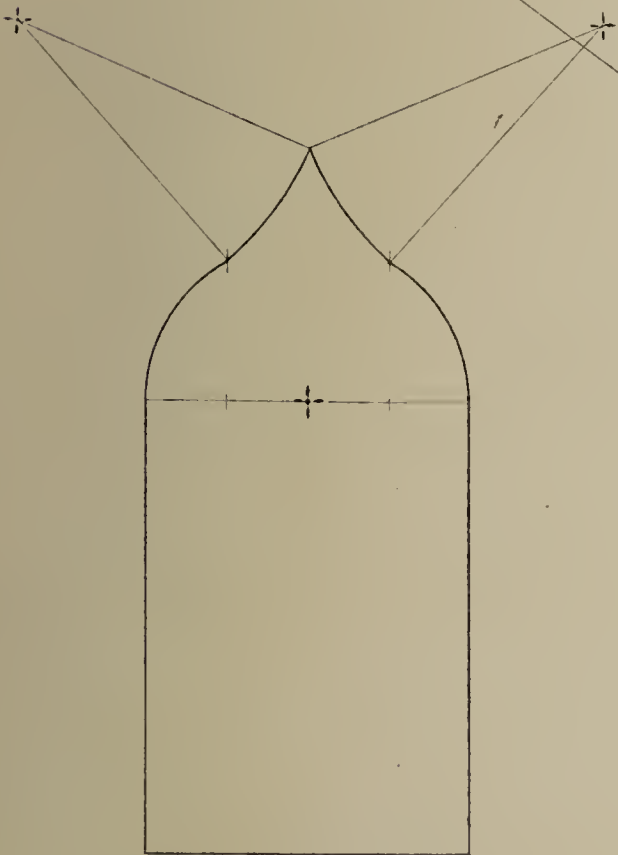
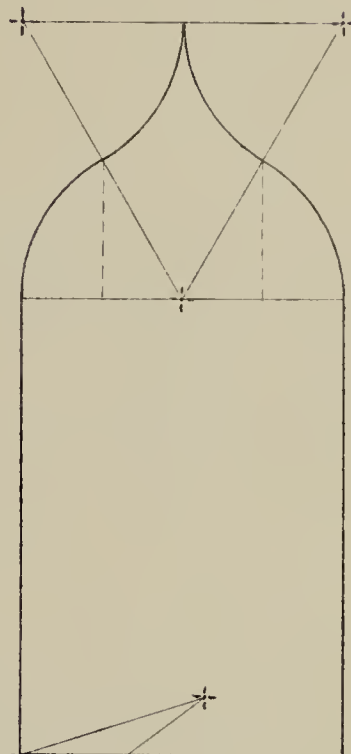
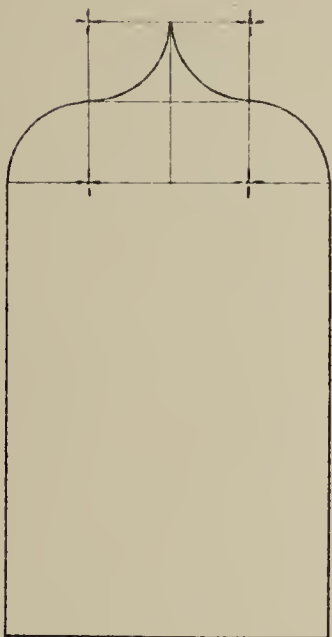
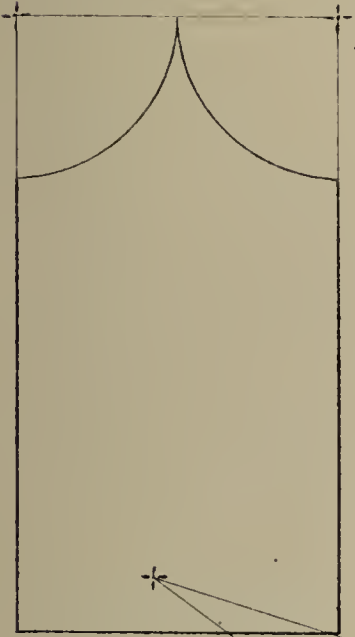
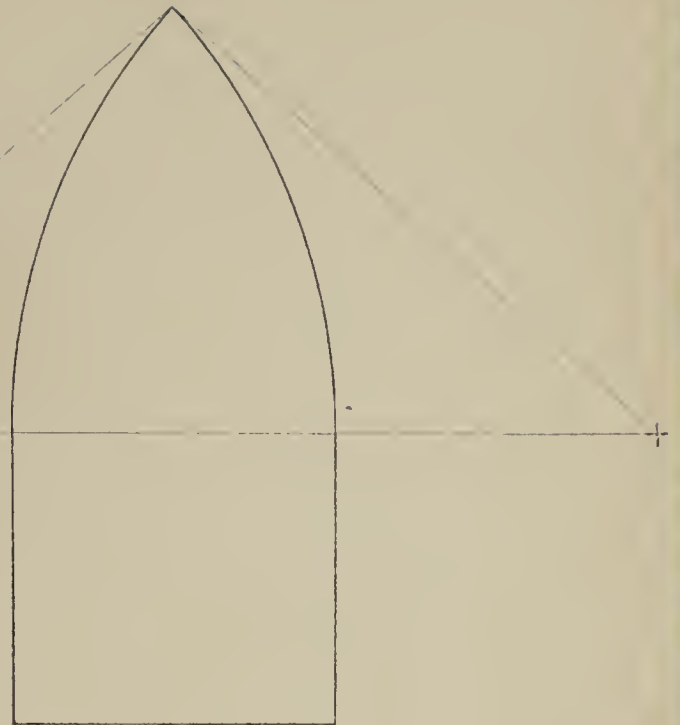
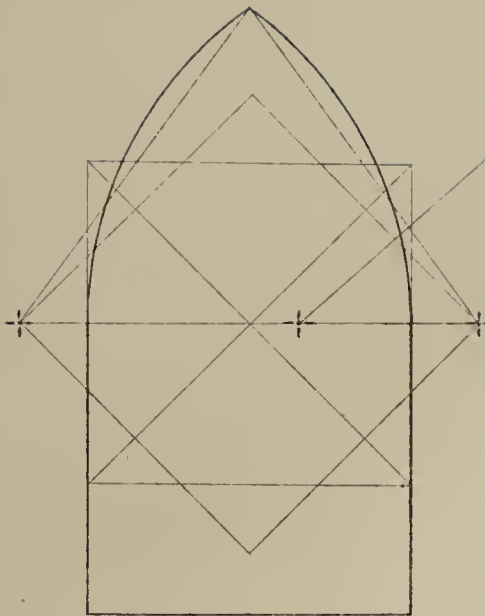
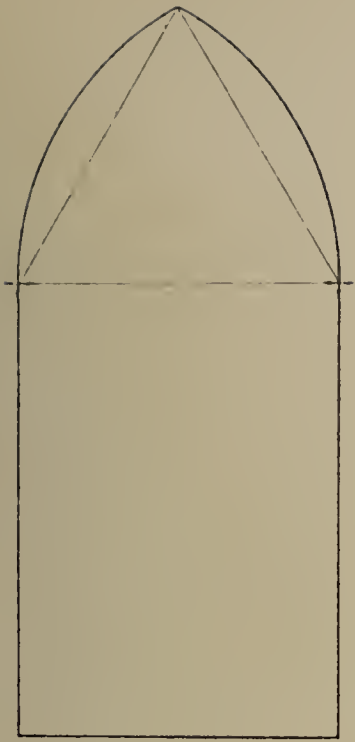




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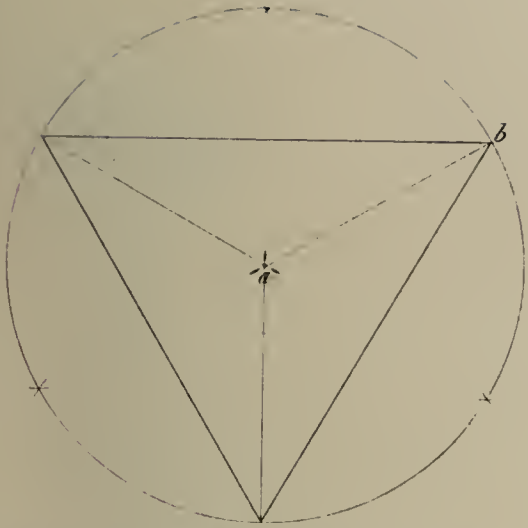
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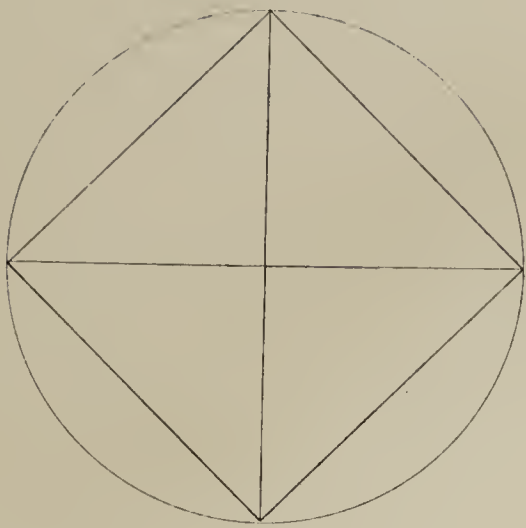
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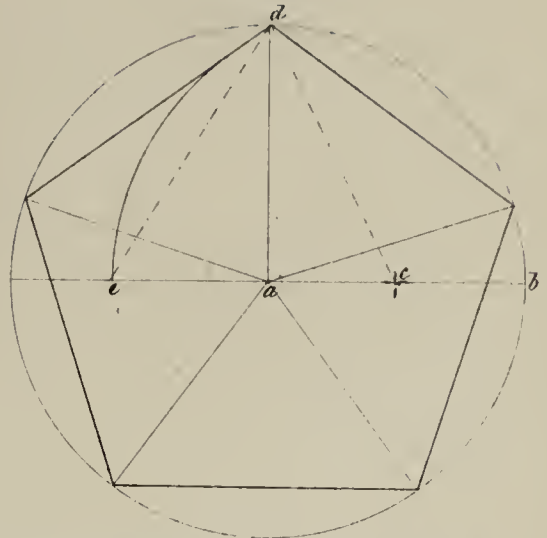


Intersect Periphery with length of Radius  $a-b$  six times; take two points of intersections for each vertex of angles in the Trihedron.

IN  
SQUARE.

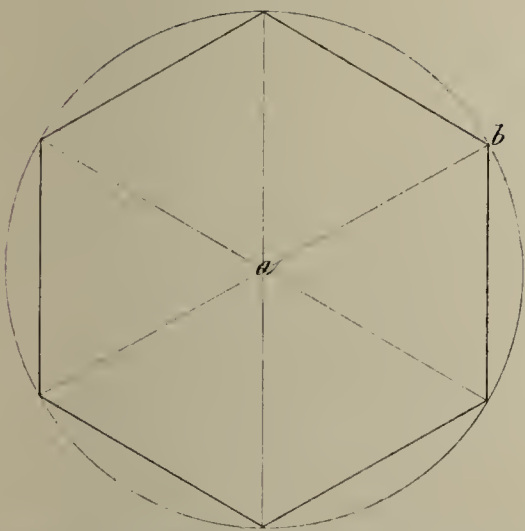


PENTAGON.



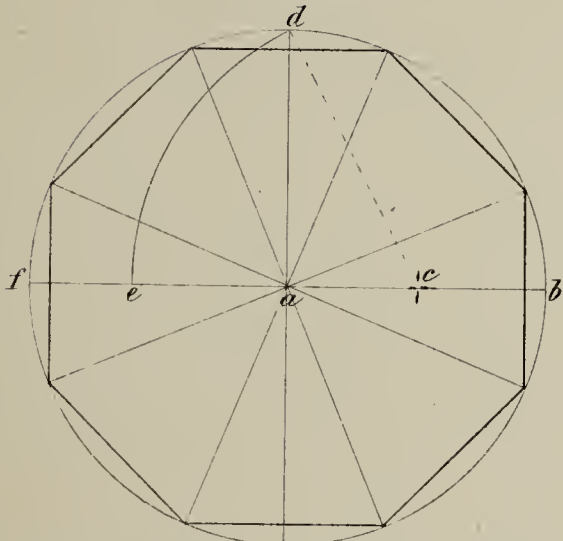
Divide Radius  $a-b$  in one-half, which gives the Center  $c$  of Segment  $d-e$ . The length of the Segment is equal to the length of one side of the Pentagon.

SEXAGON.



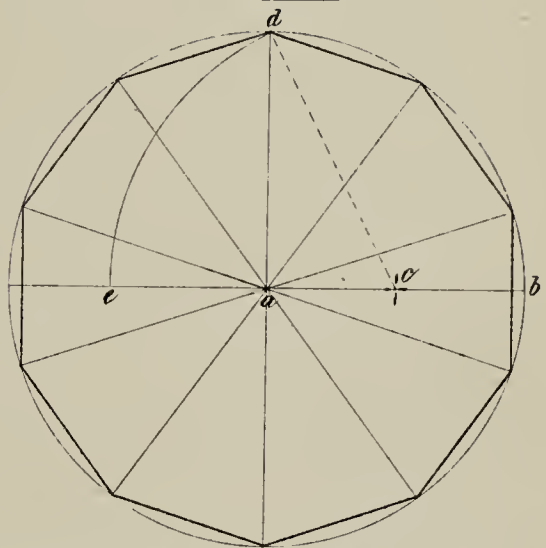
Intersect Periphery with length of Radius  $a-b$ . Each intersection produces the vertex of the angles in the Sexagon.

OCTAGON.



Divide Radius  $a-b$  in one-half, which point gives the Center  $c$ ; describe the Segment  $d-e$ . The distance  $e-f$  is equal to one-half of the length of one side of the Octagon.

DECAGON.



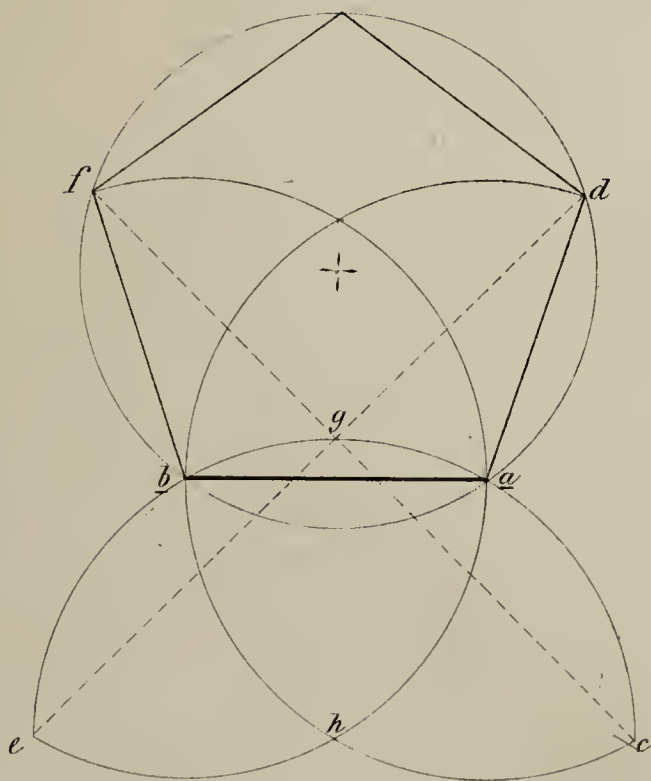
Divide Radius  $a-b$  in one-half, which point gives the Center  $c$ ; describe the Segment  $d-e$ . The distance  $e-a$  is equal to the length of one side of the Decagon.

## CONSTRUCTION OF THE PENTAGON

BY THE

GIVEN LENGTH OF ONE SIDE.

$a-b$ .

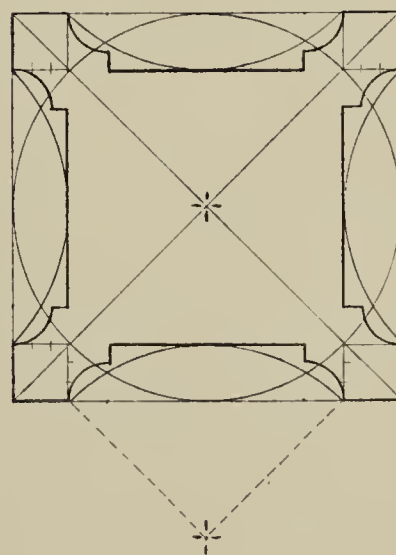
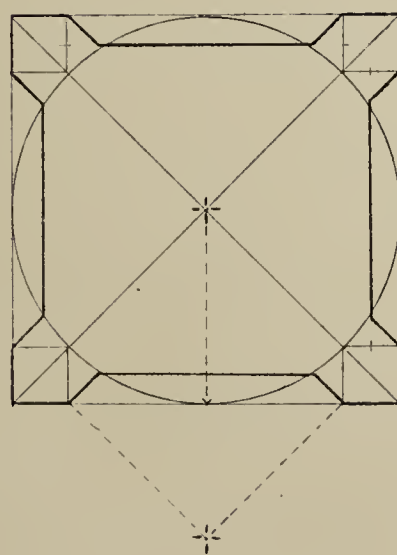
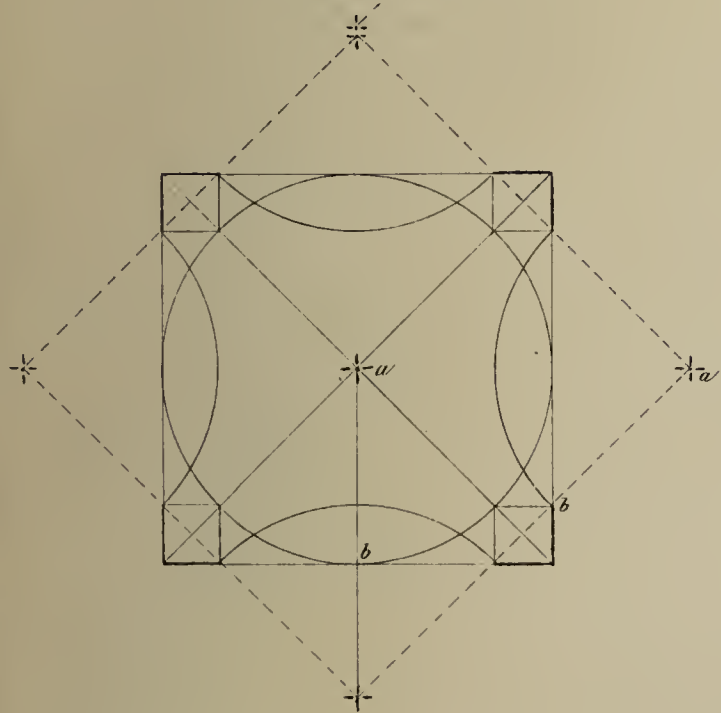
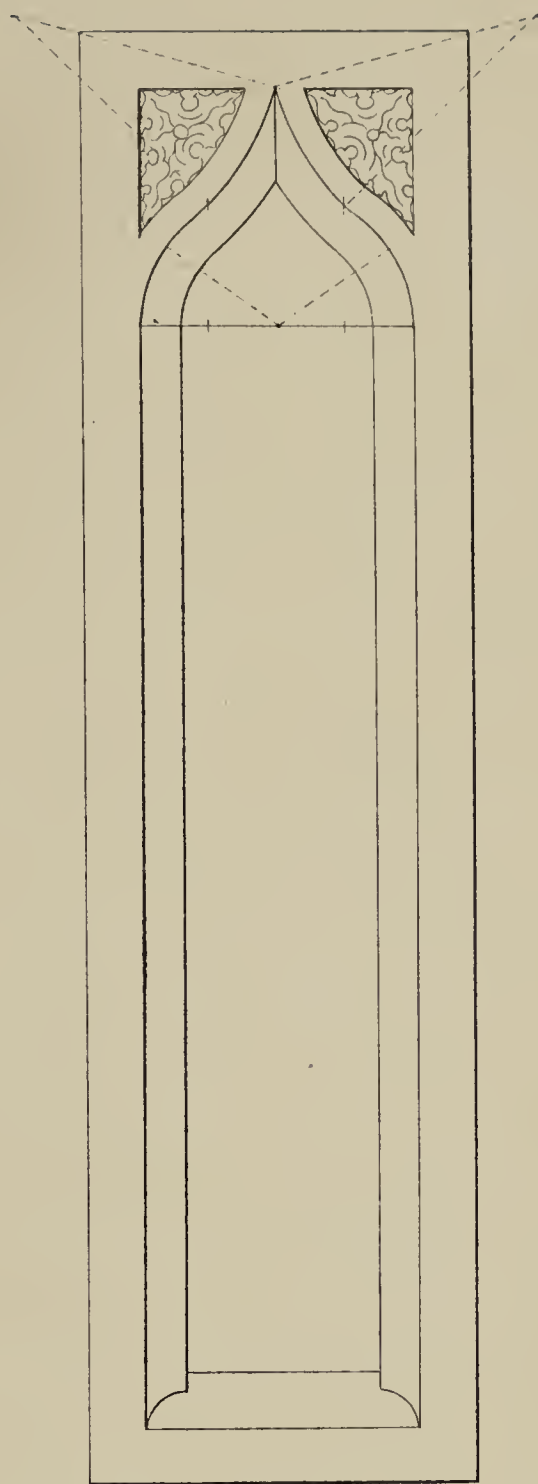
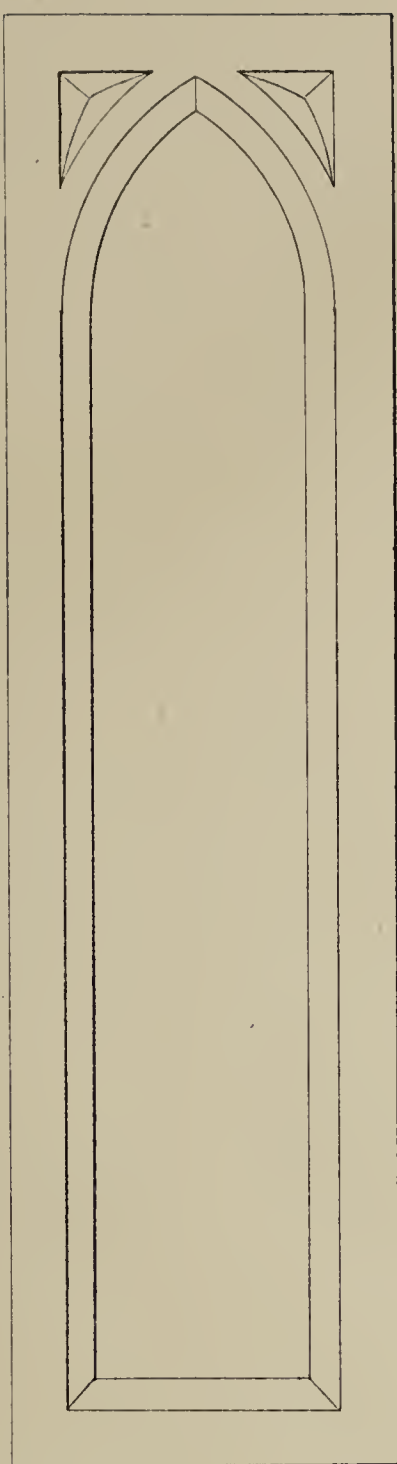
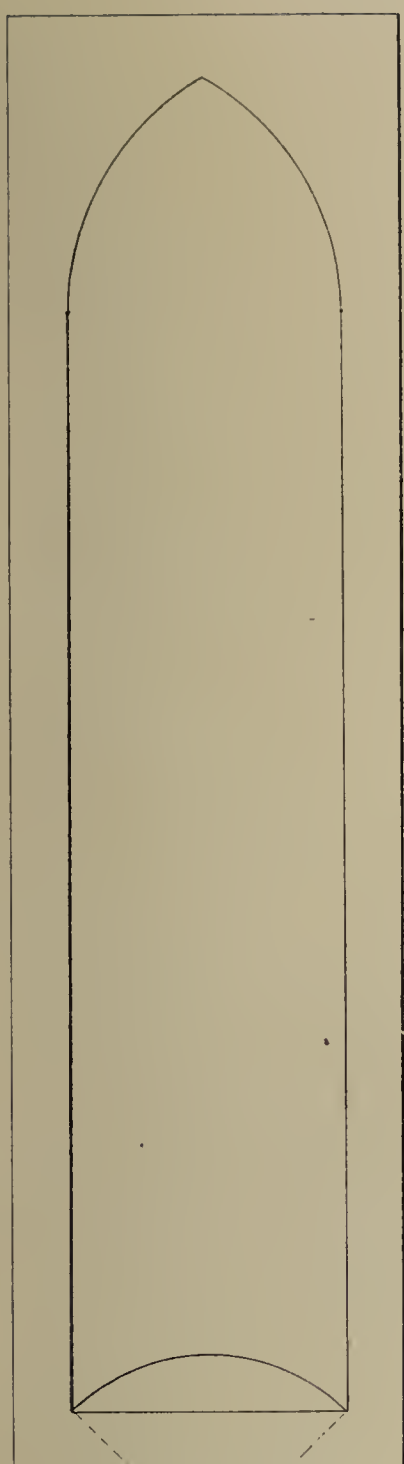


Set compass in  $a$ ; open it to the given length of side  $a-b$ , and describe section of a circle  $c-d$ ; set compass in  $b$ , and describe the same kind section of a circle  $e-f$ ; set compass in  $g$ , and intersect with the same opening of the compass the already described sections of circles in  $e$  and  $c$ ; then draw the lines  $c-f$  and  $e-d$  through center point  $g$ , and the ends of lines  $b-f$  and  $a-d$  are given with adjacent angles.

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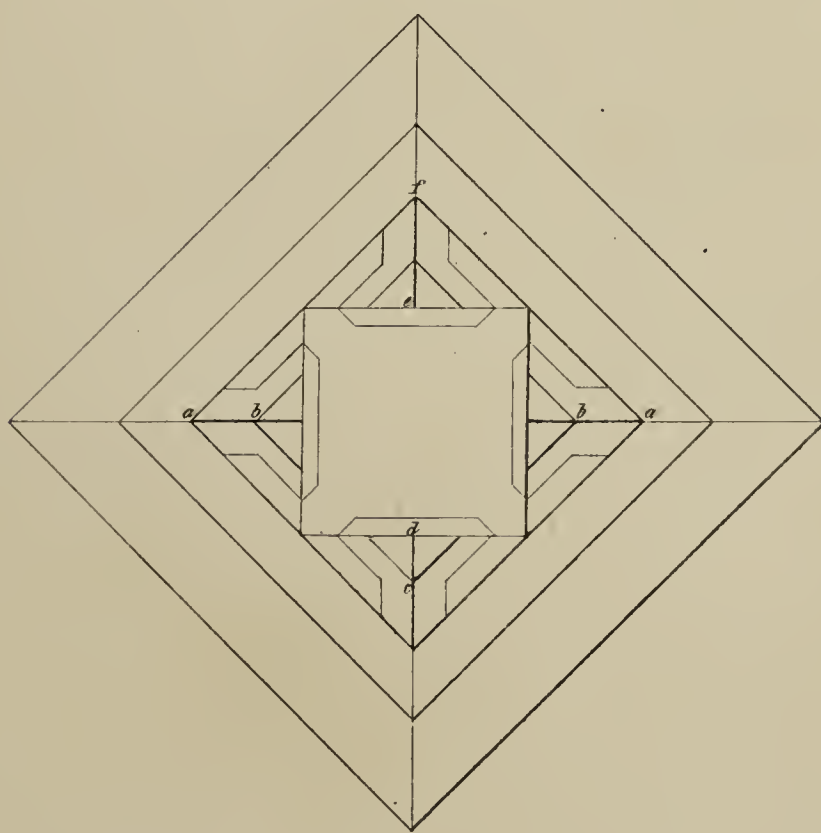
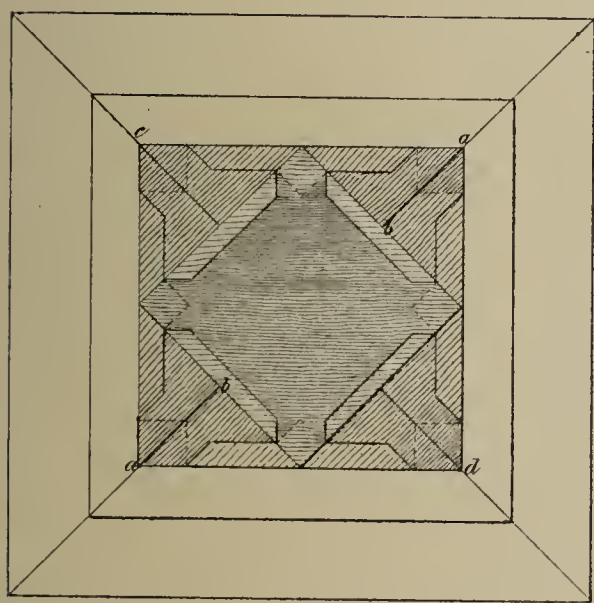
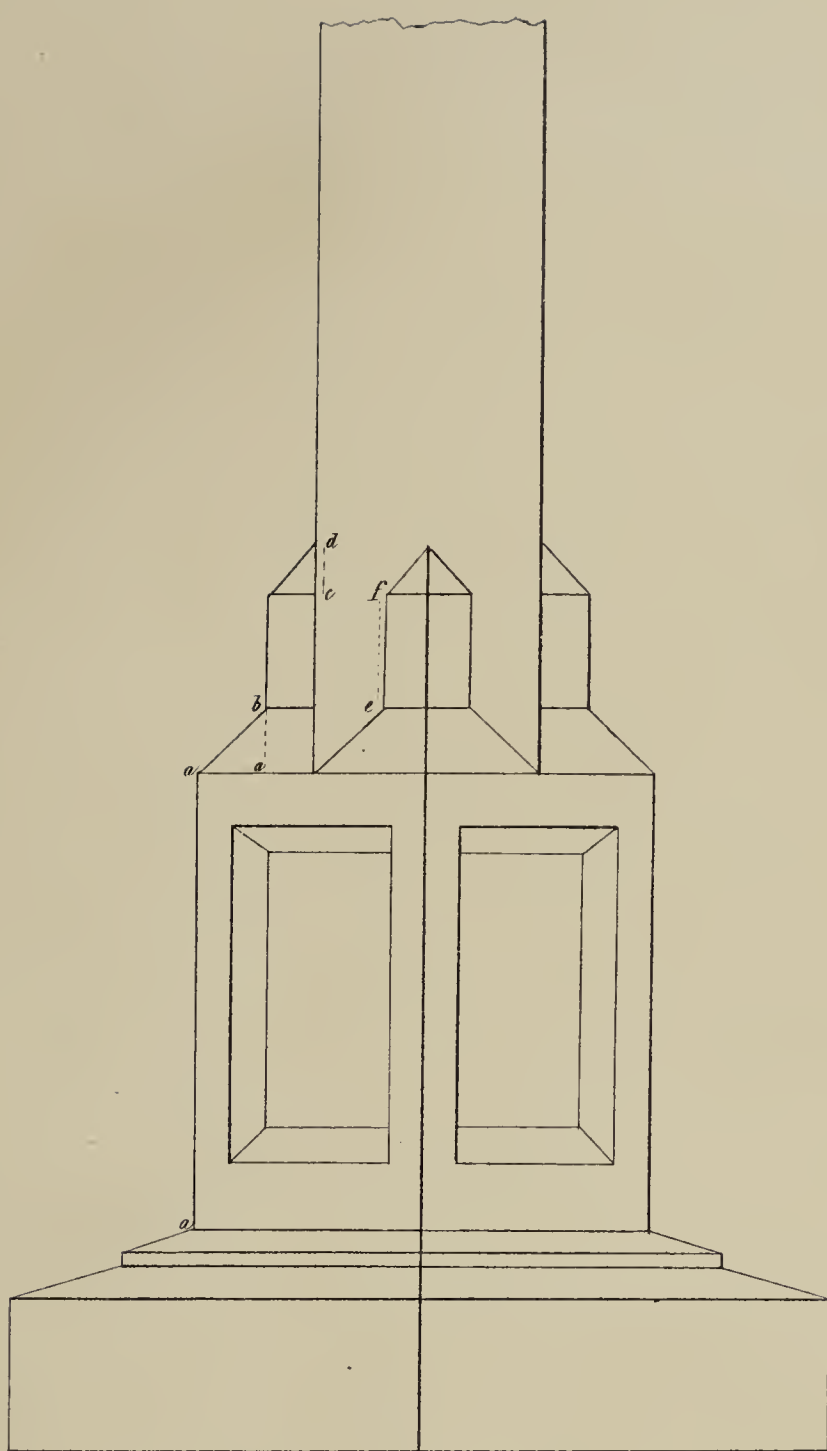
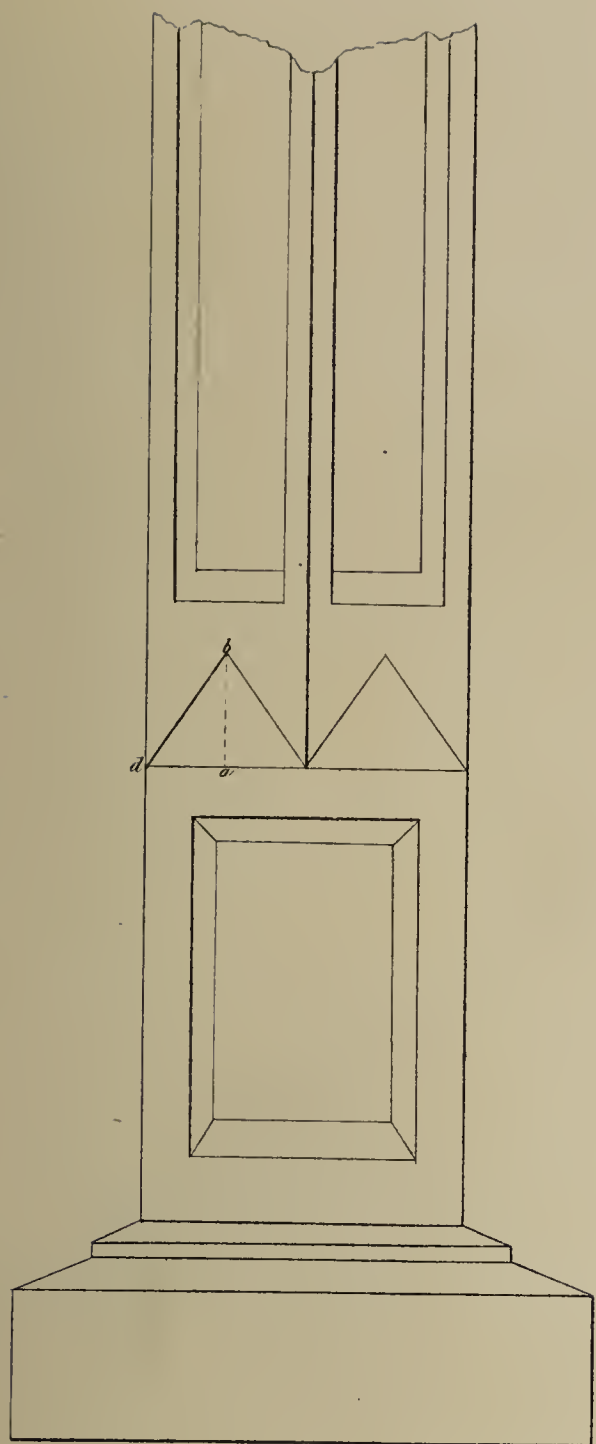




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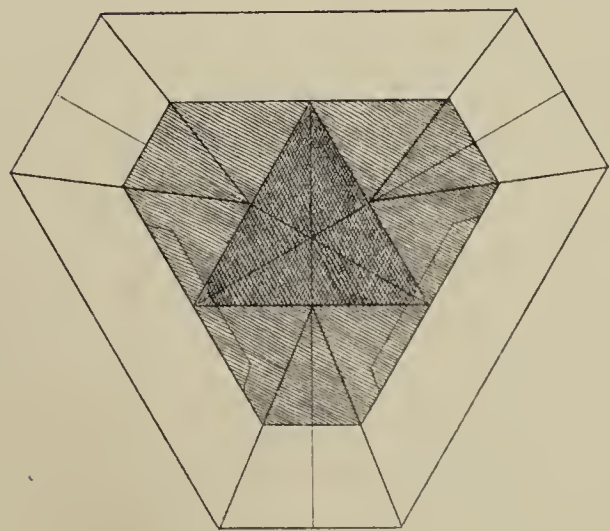
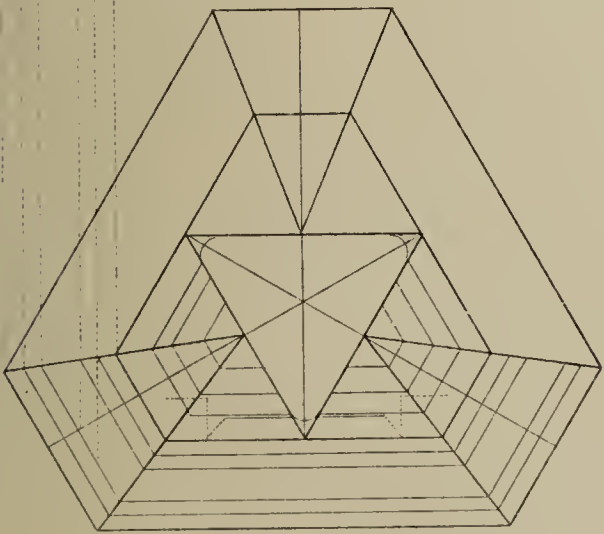
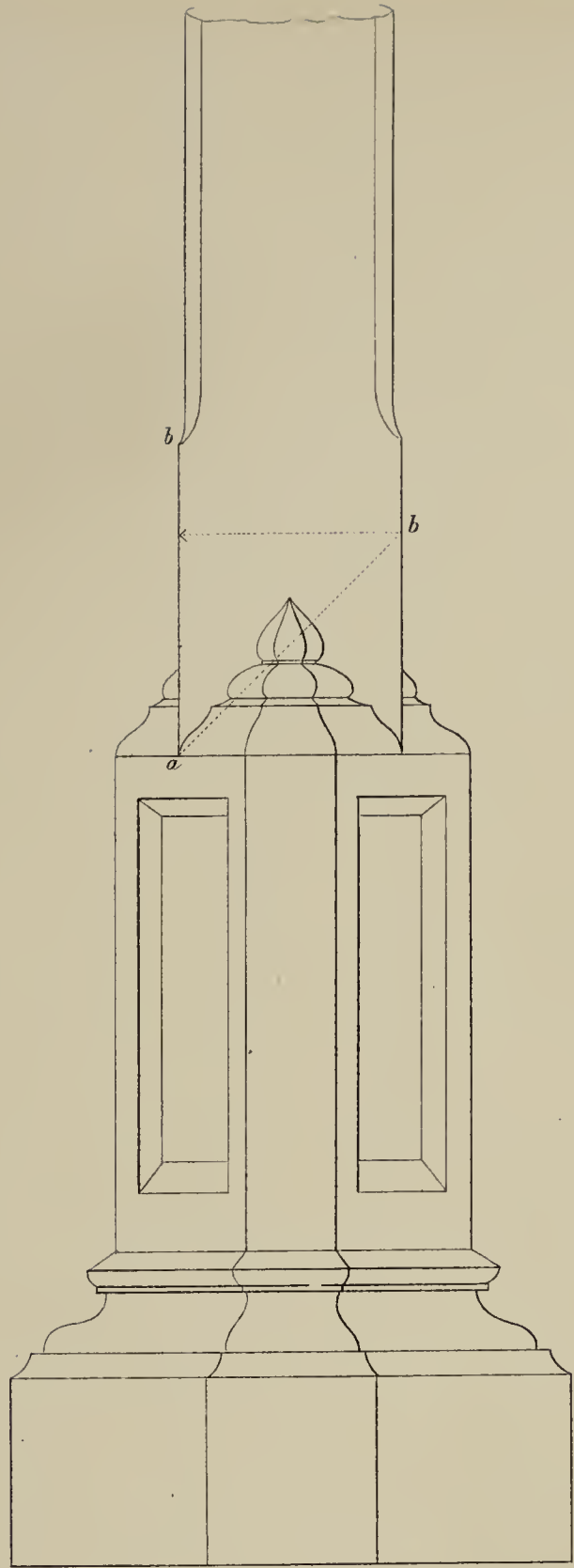
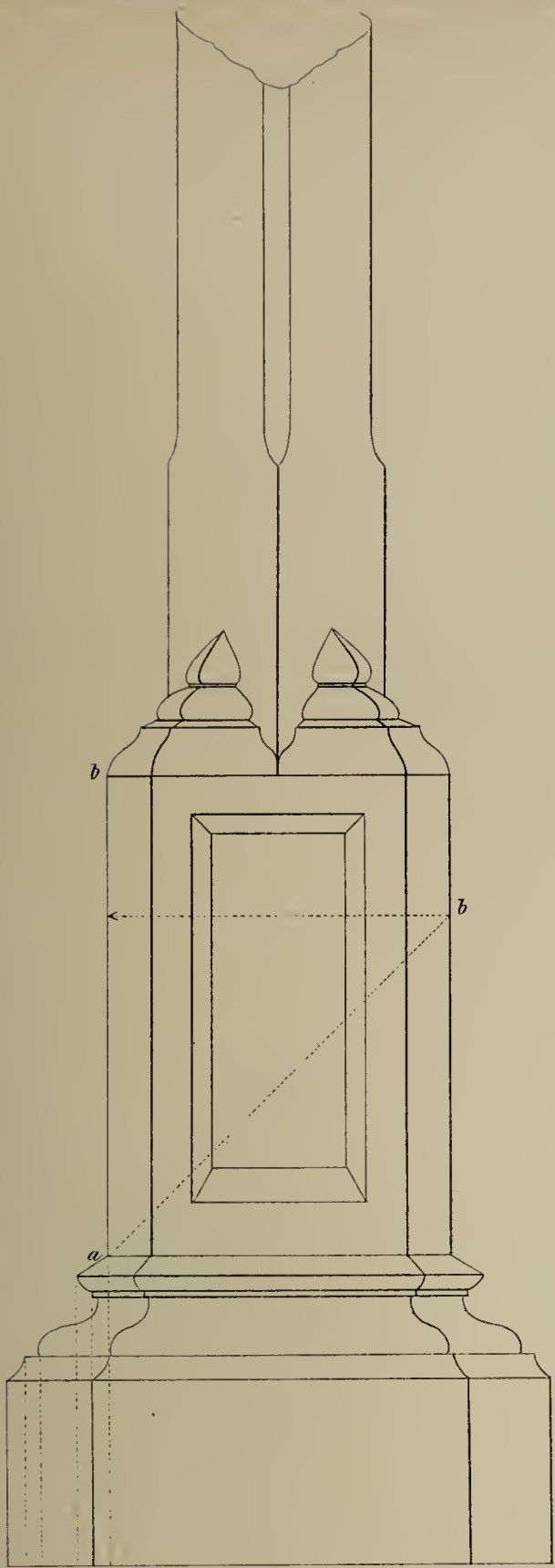




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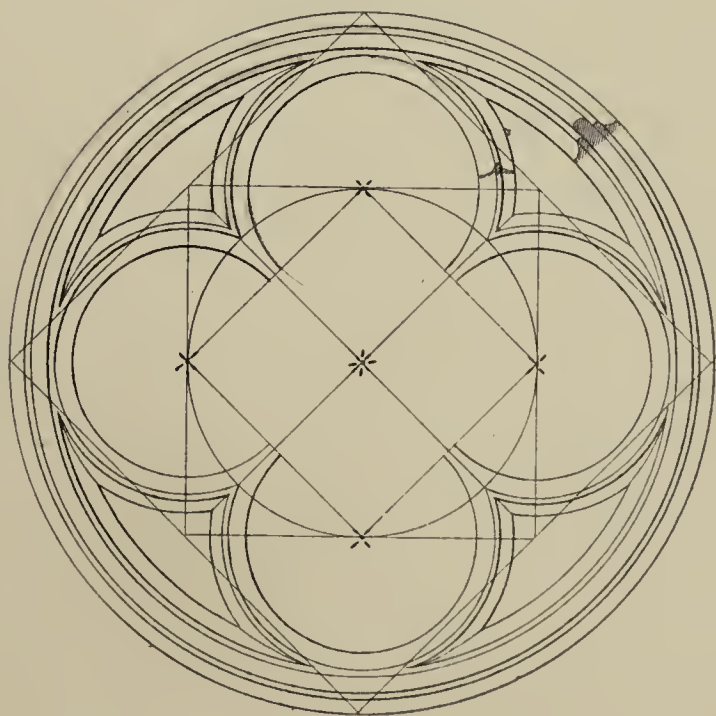
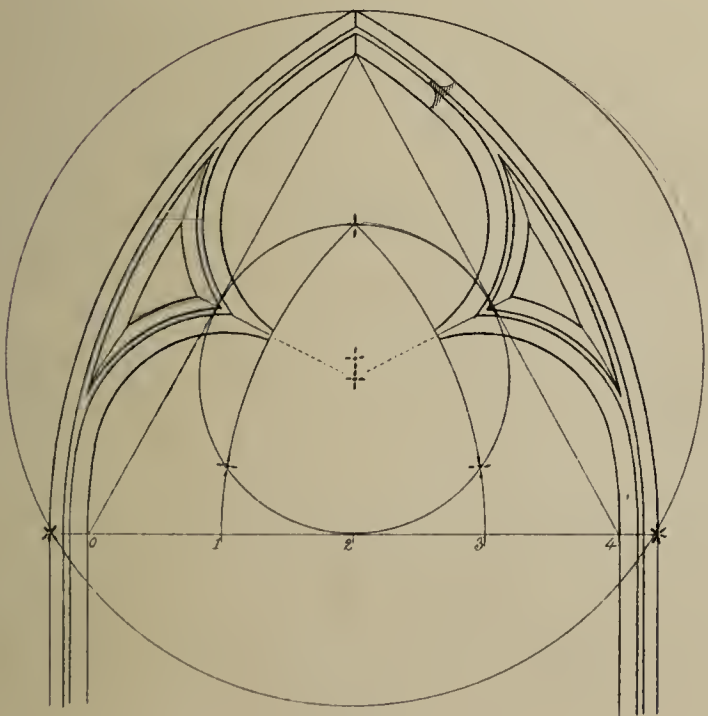
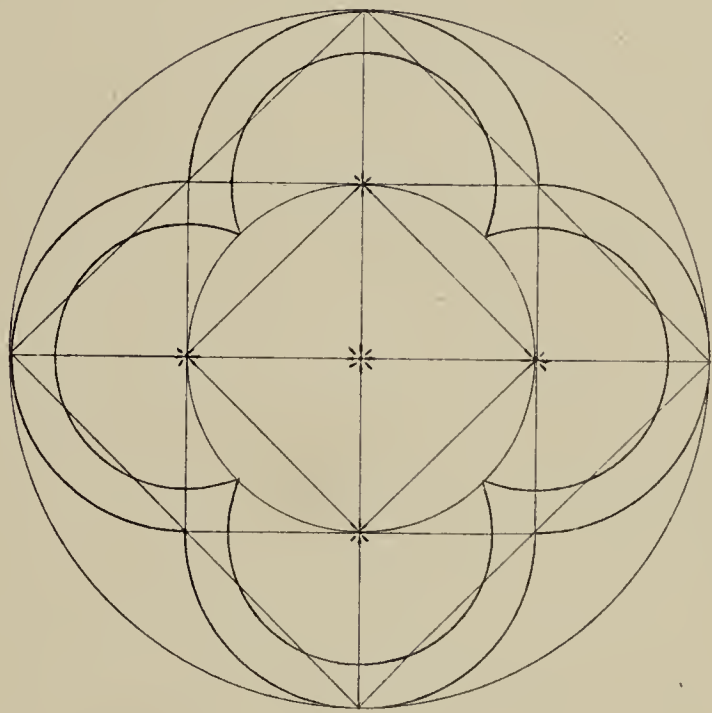
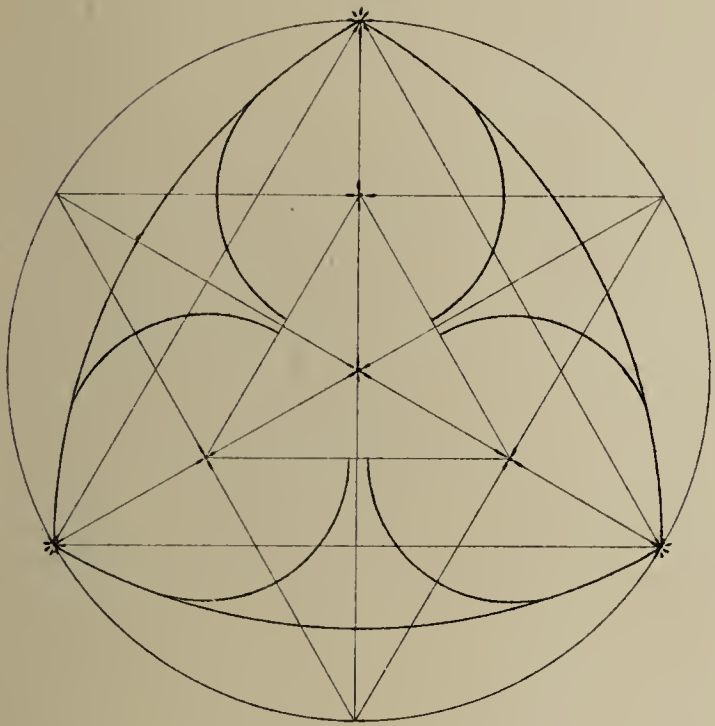
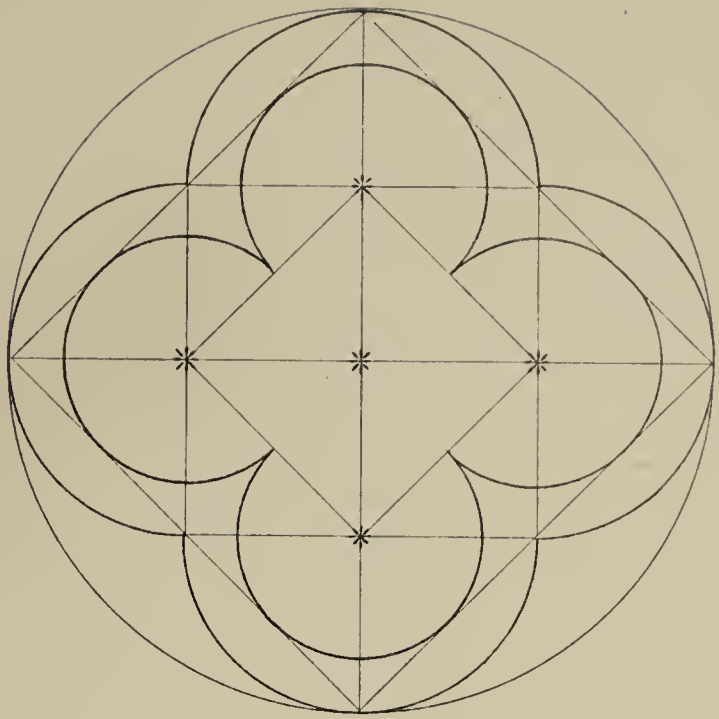
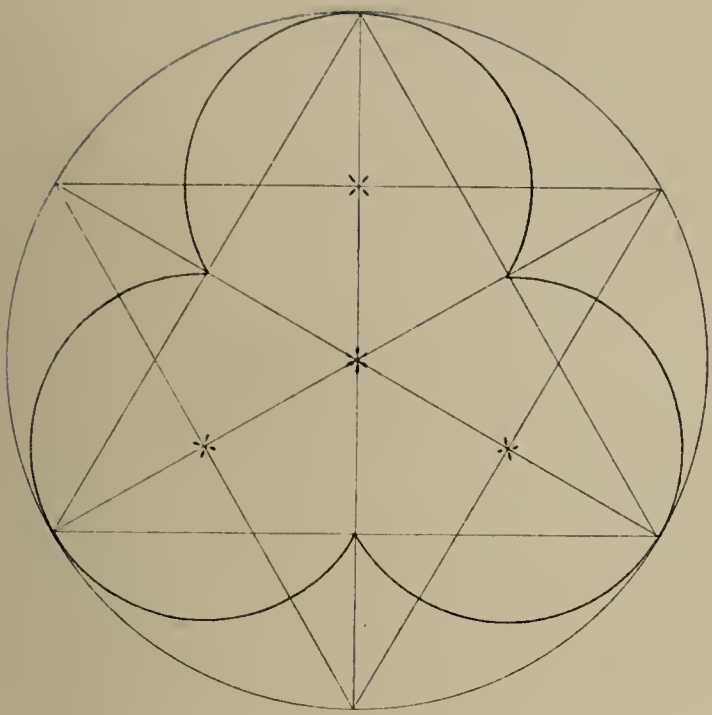


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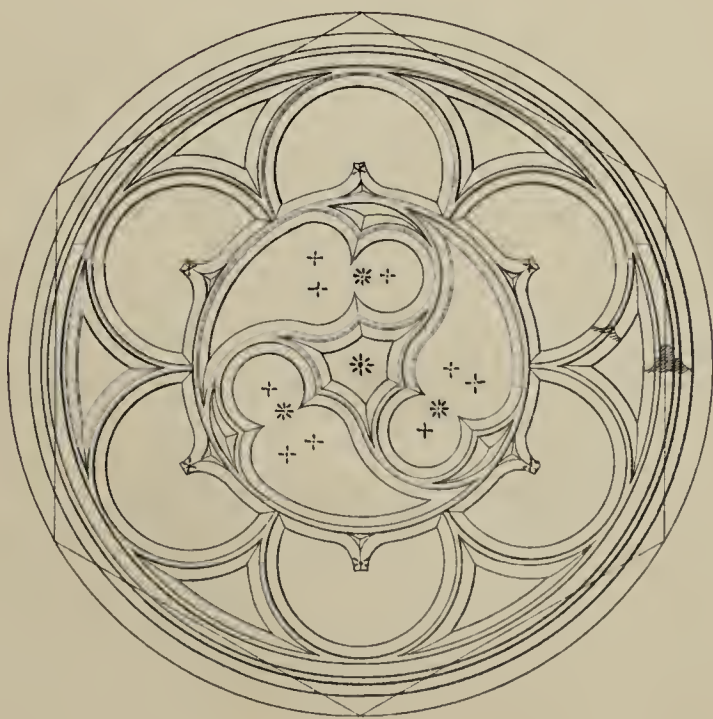
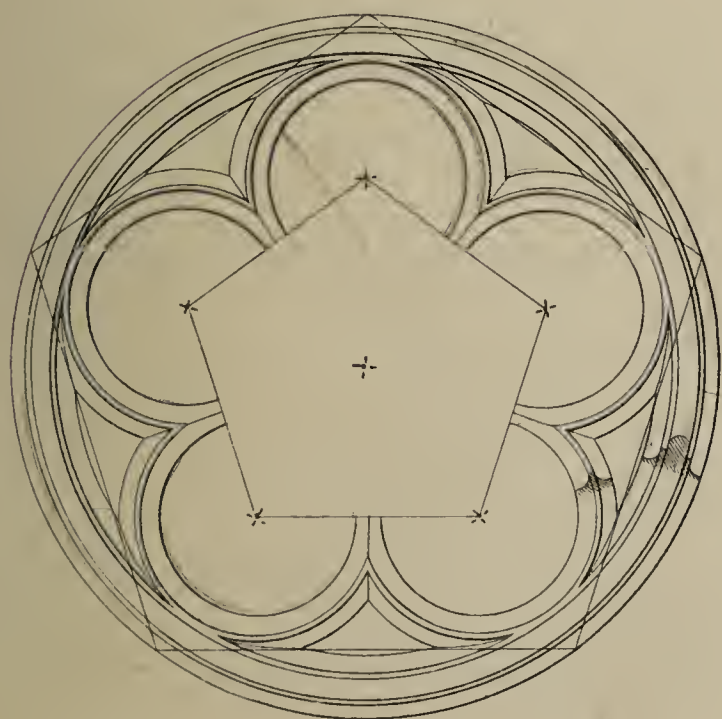
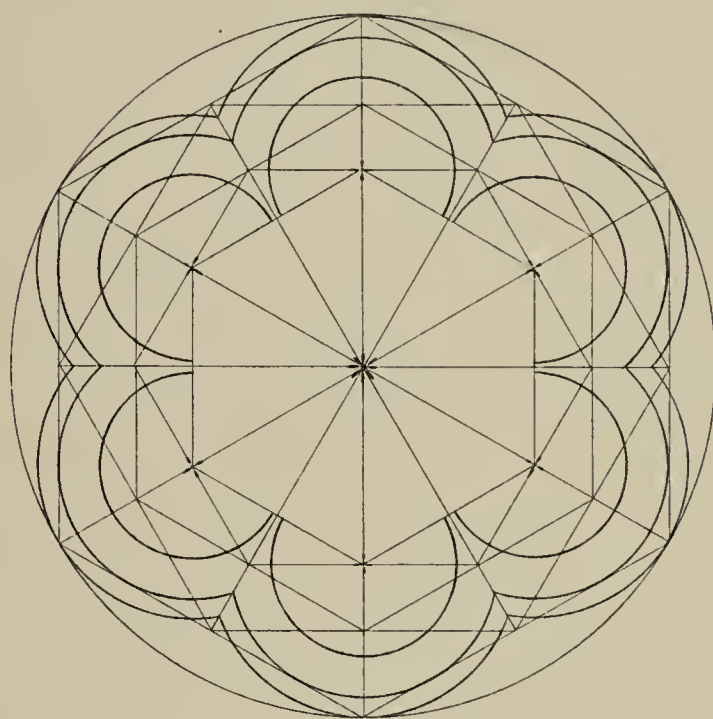
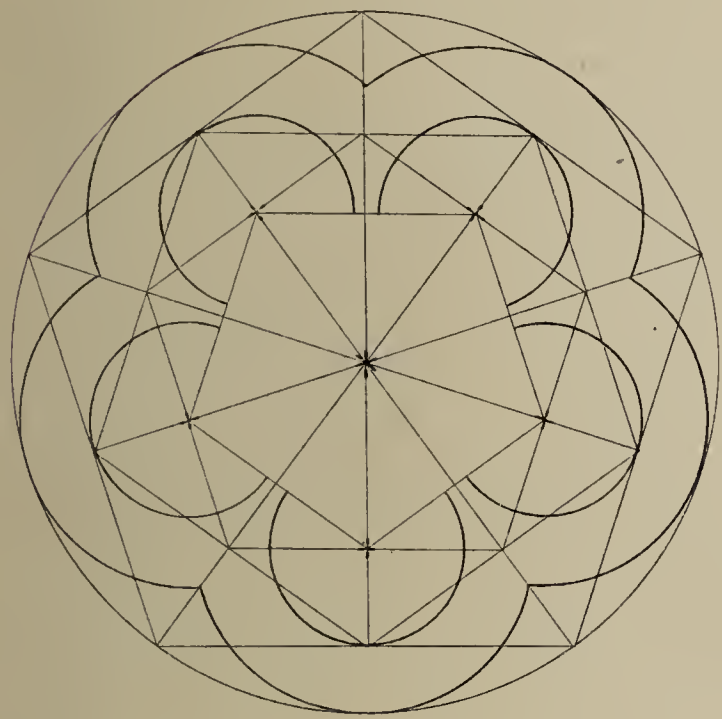
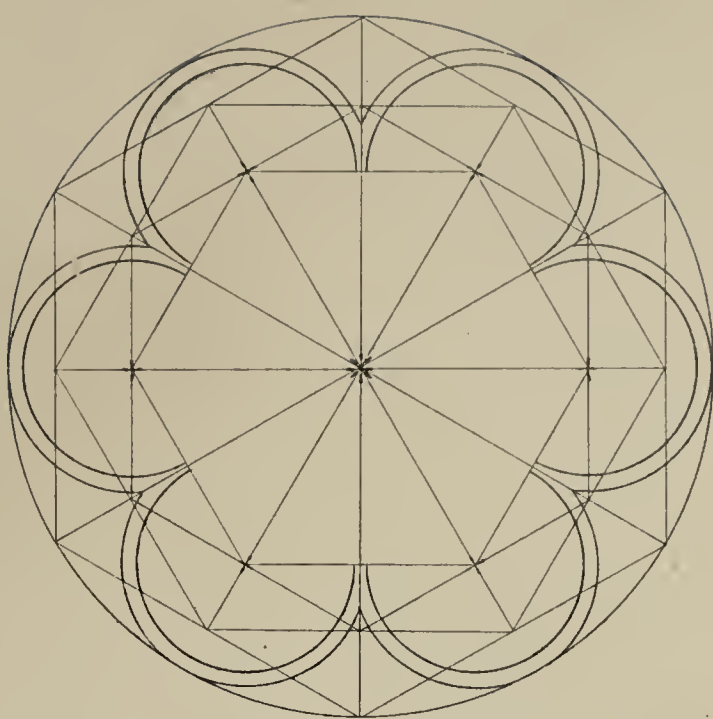
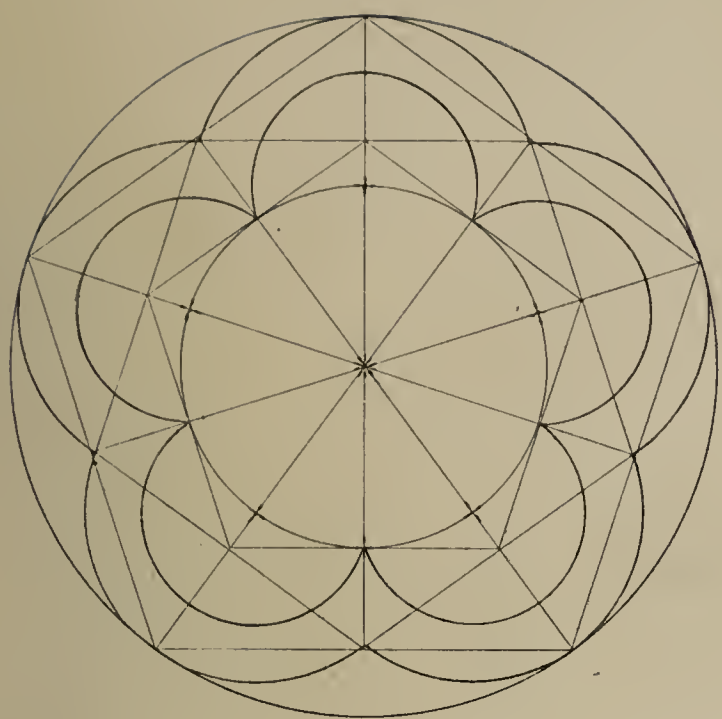




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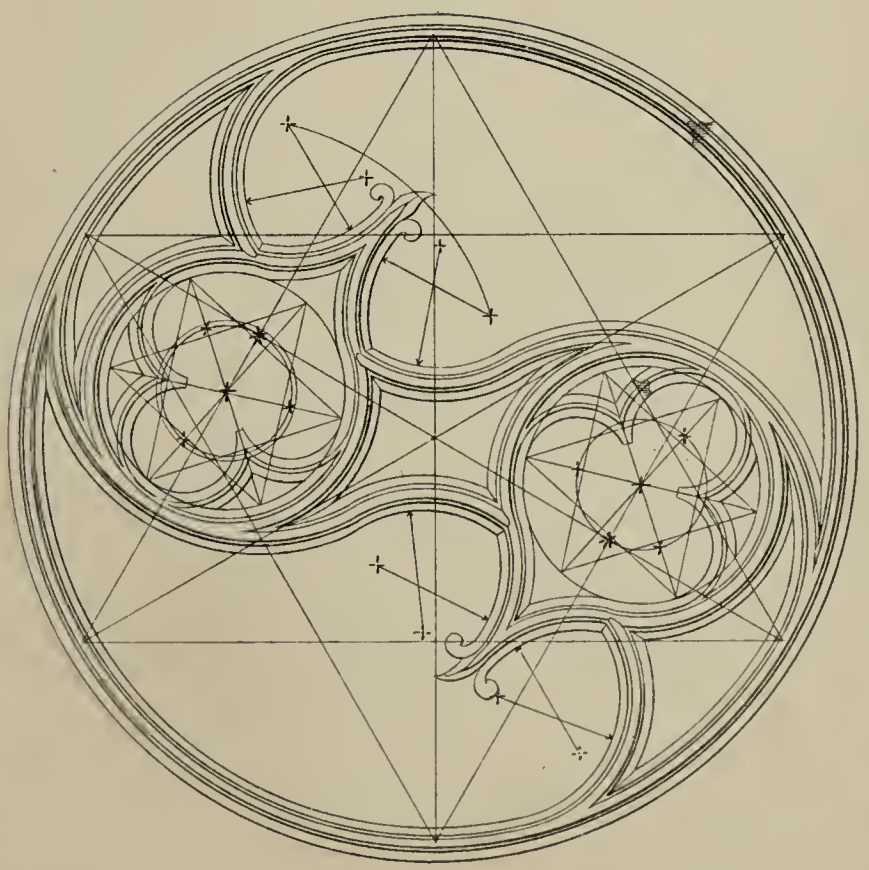
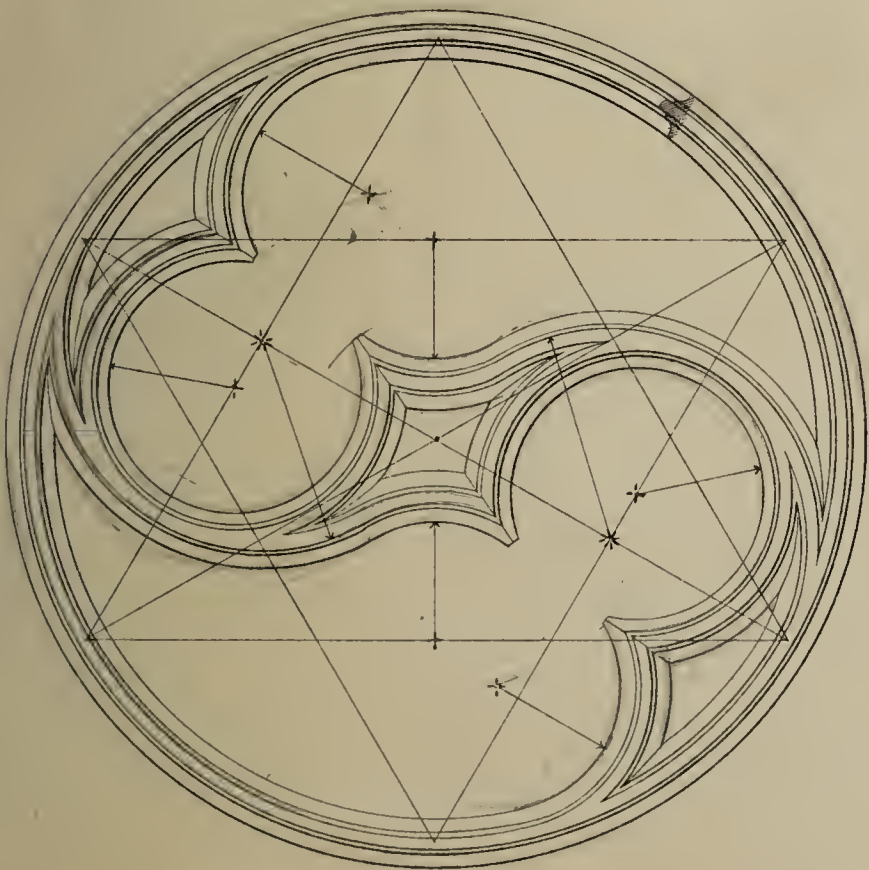
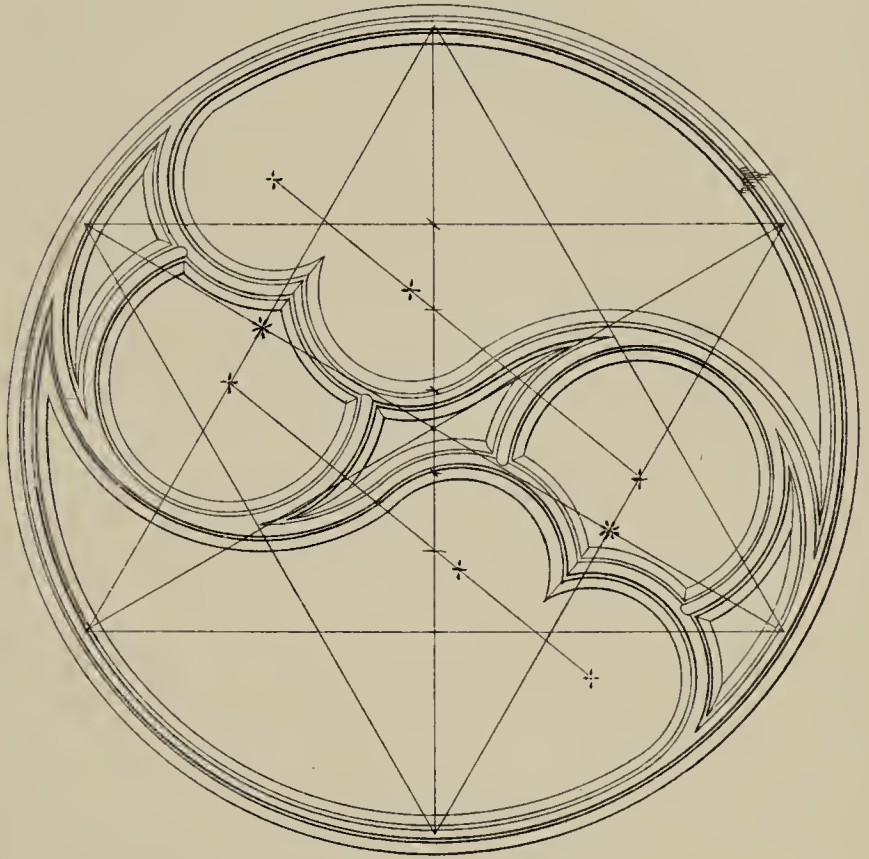
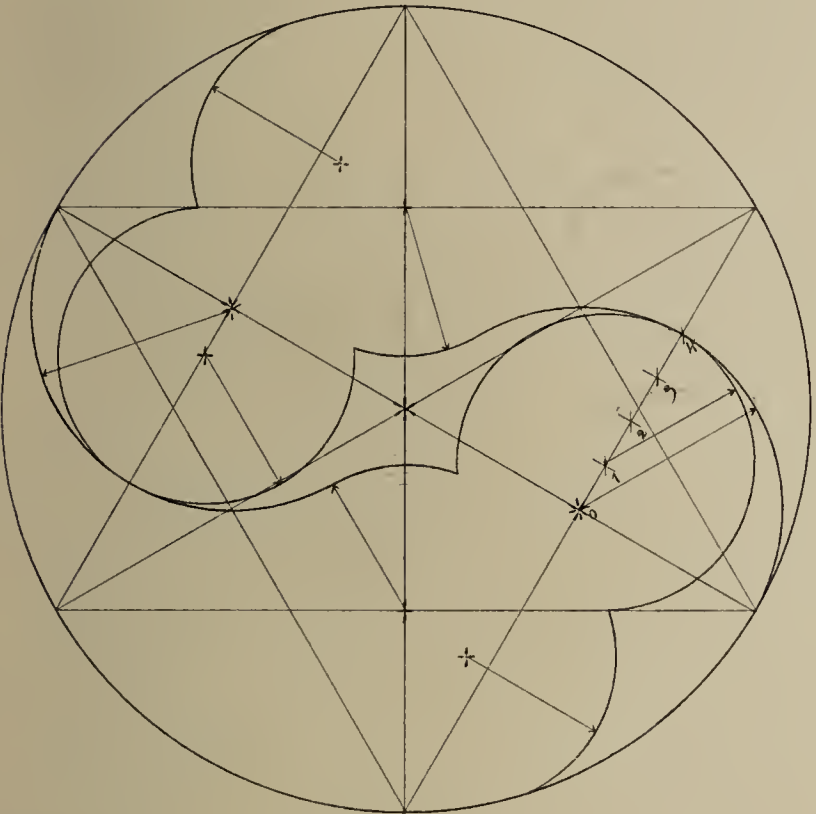
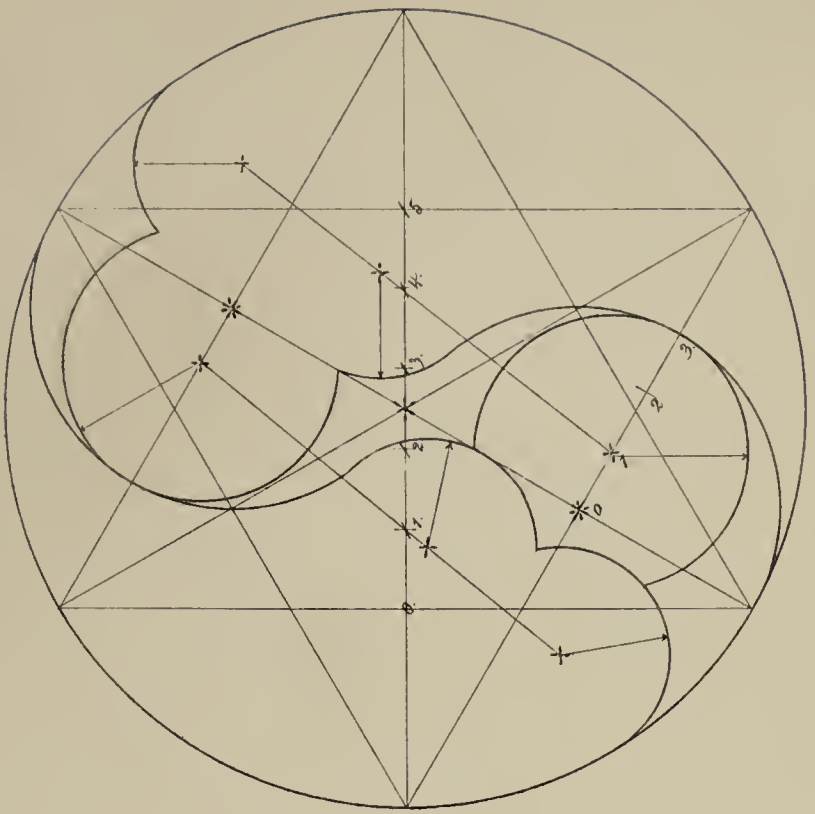
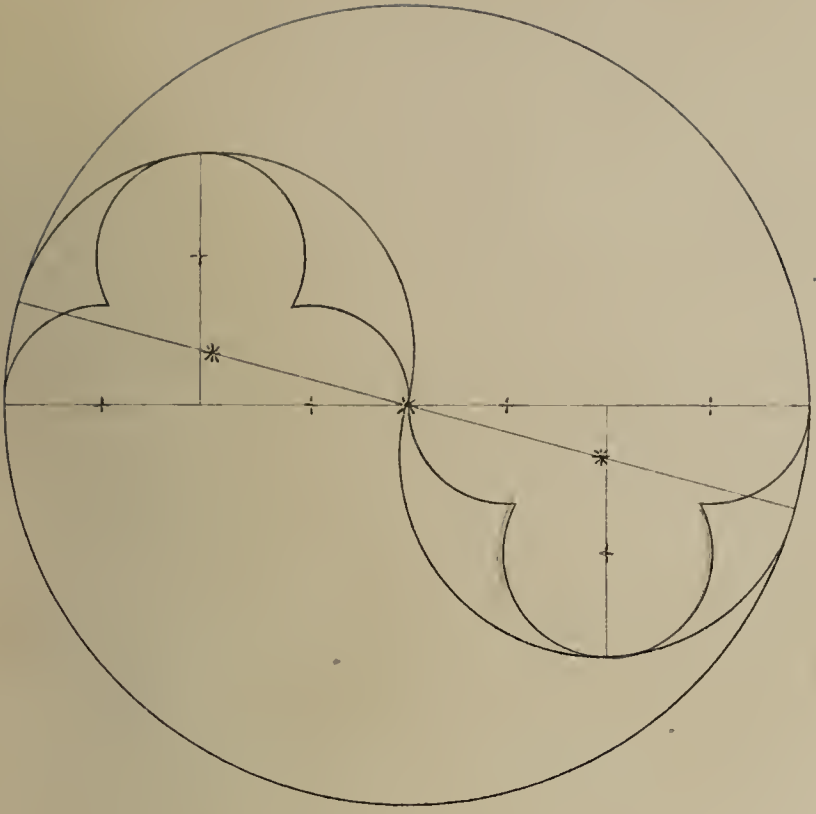




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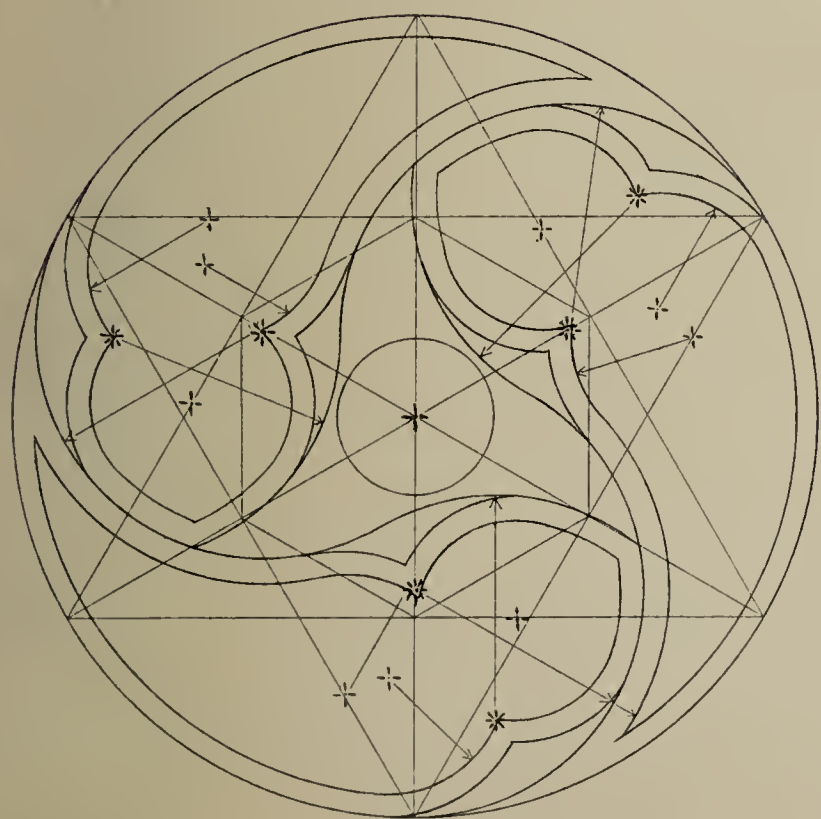
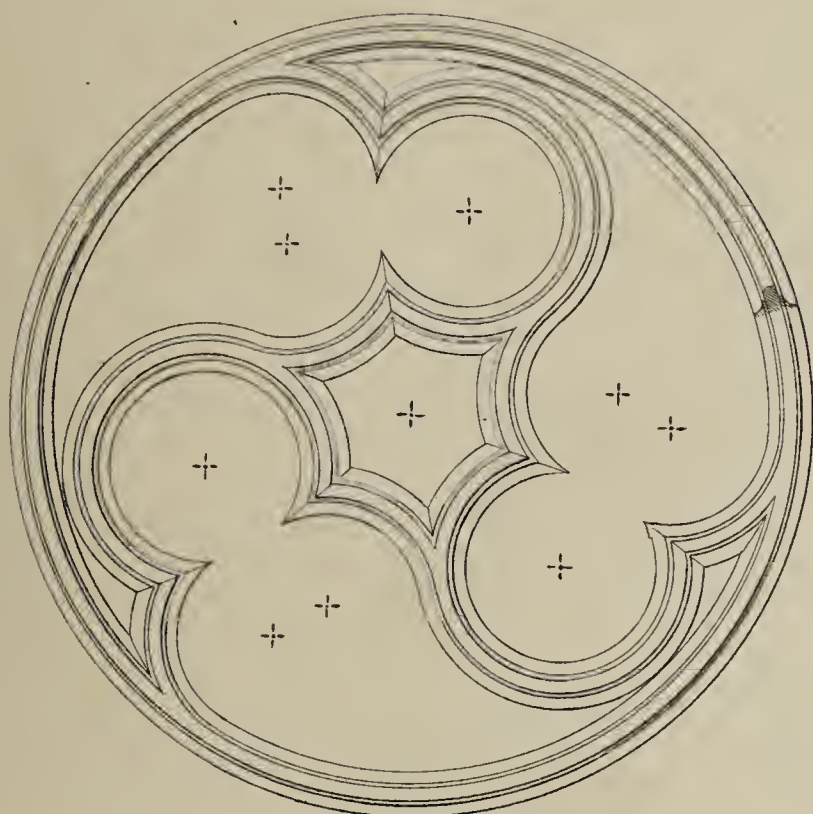
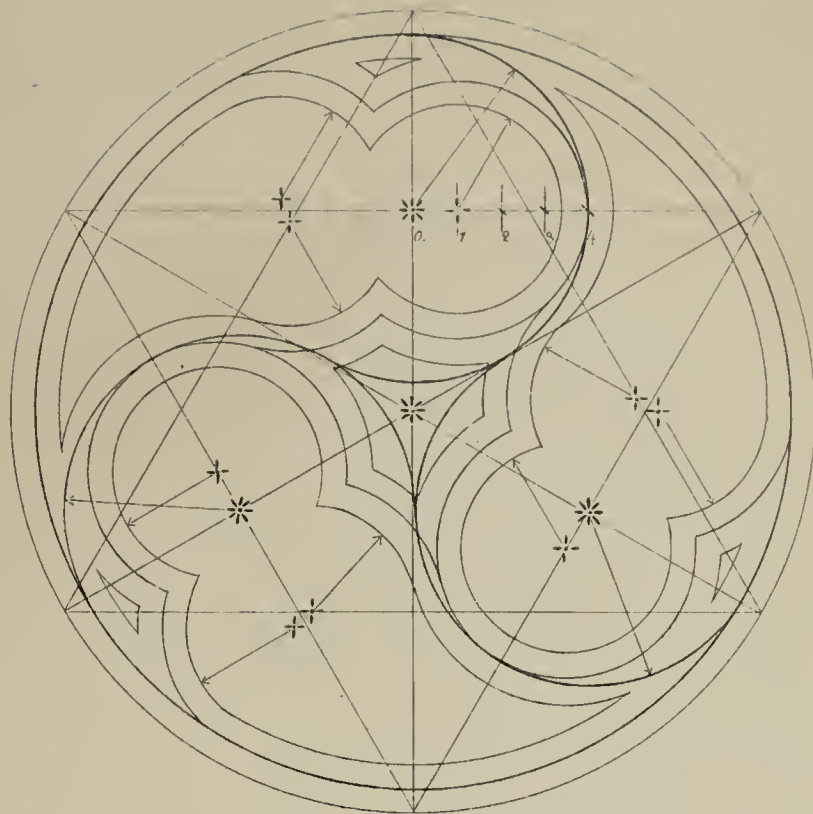
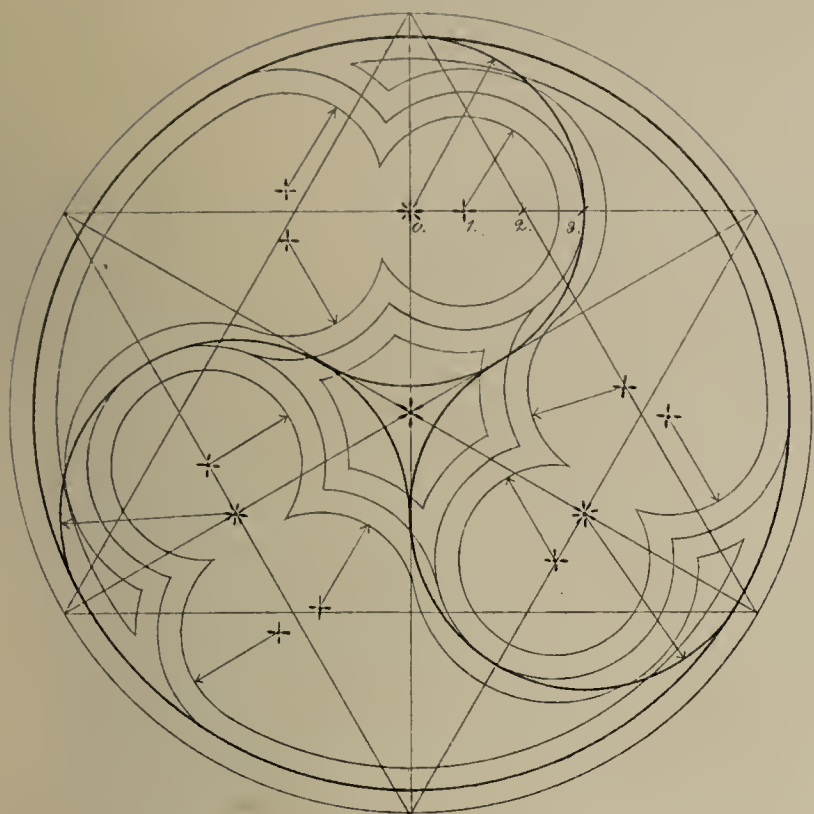




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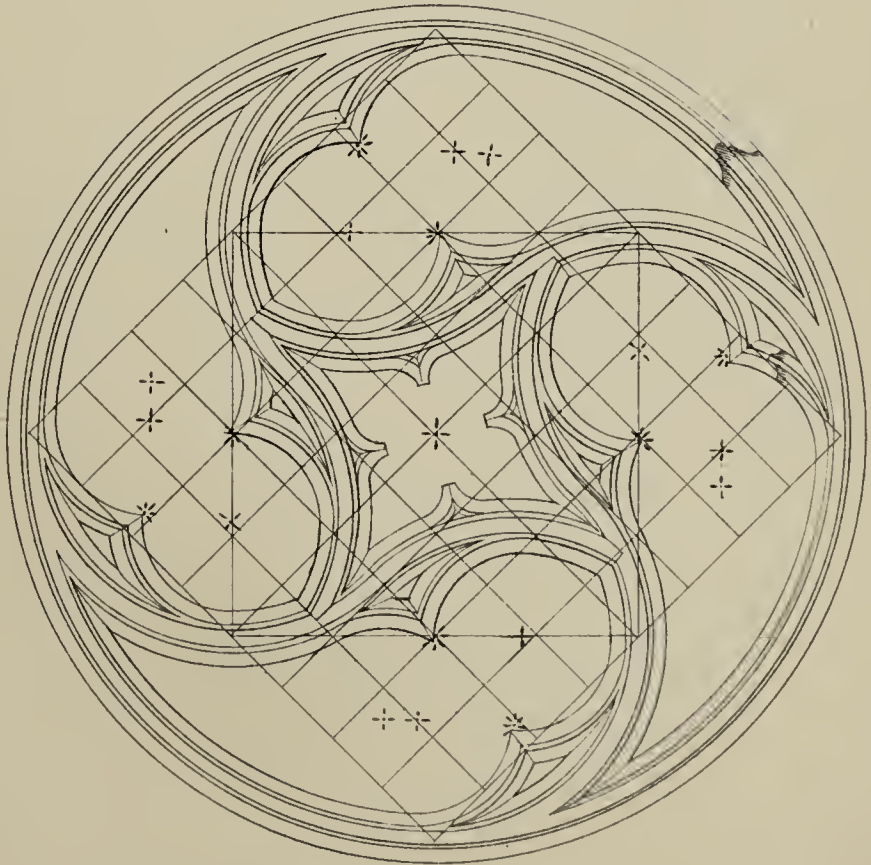
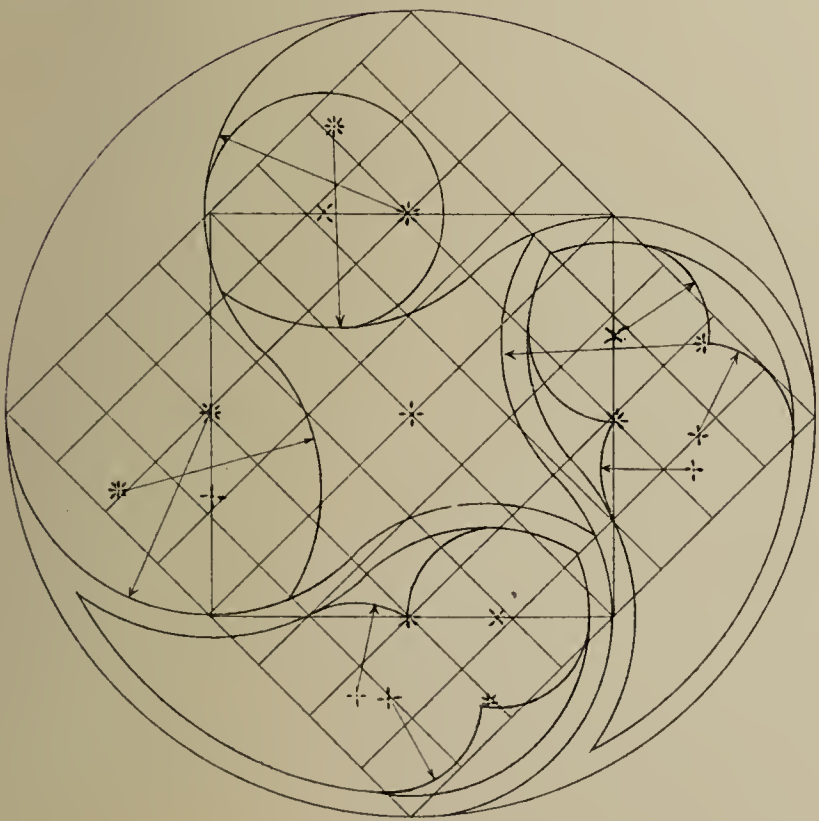
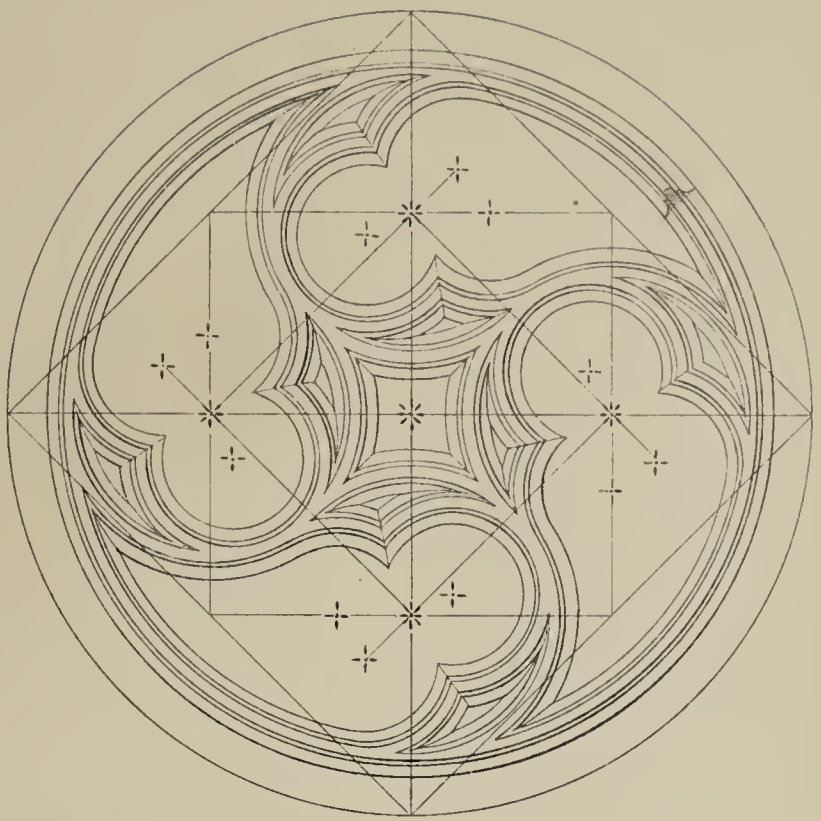
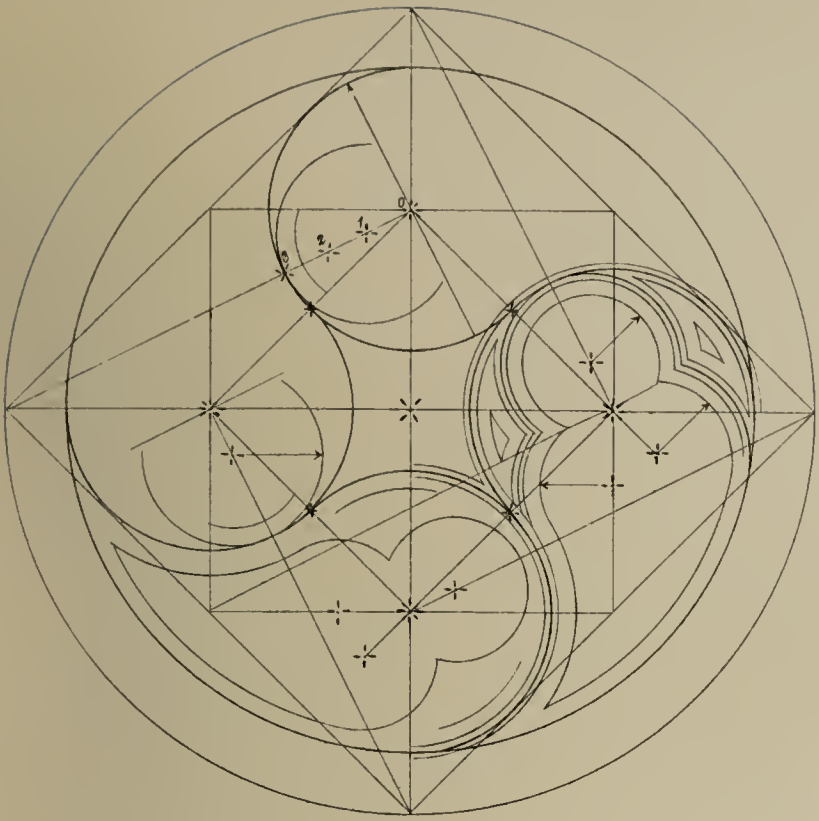




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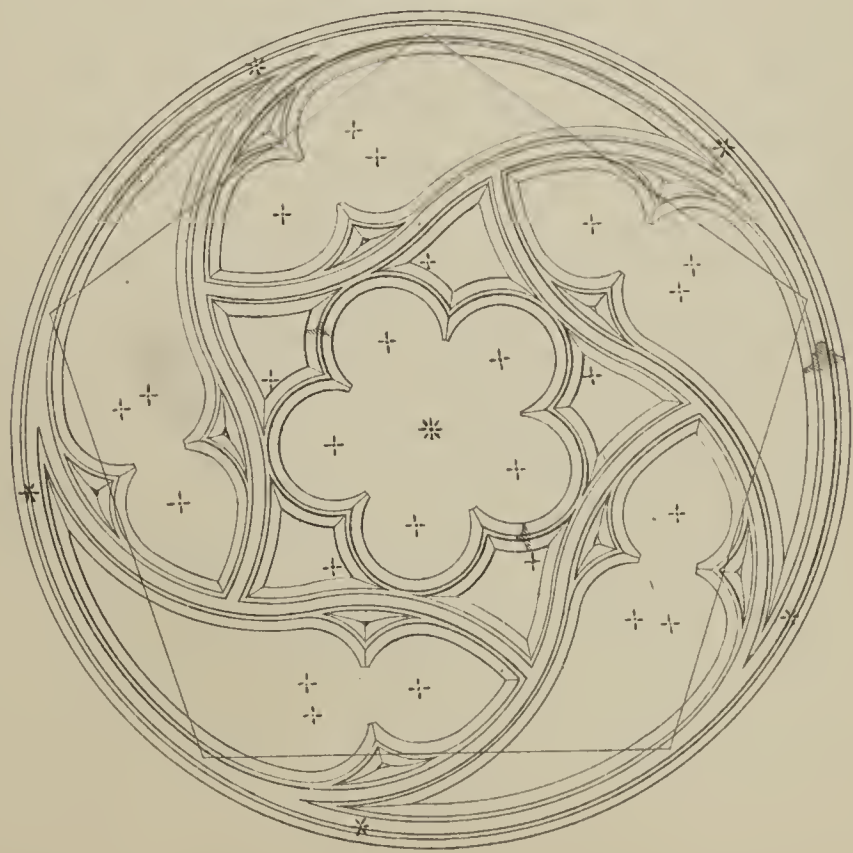
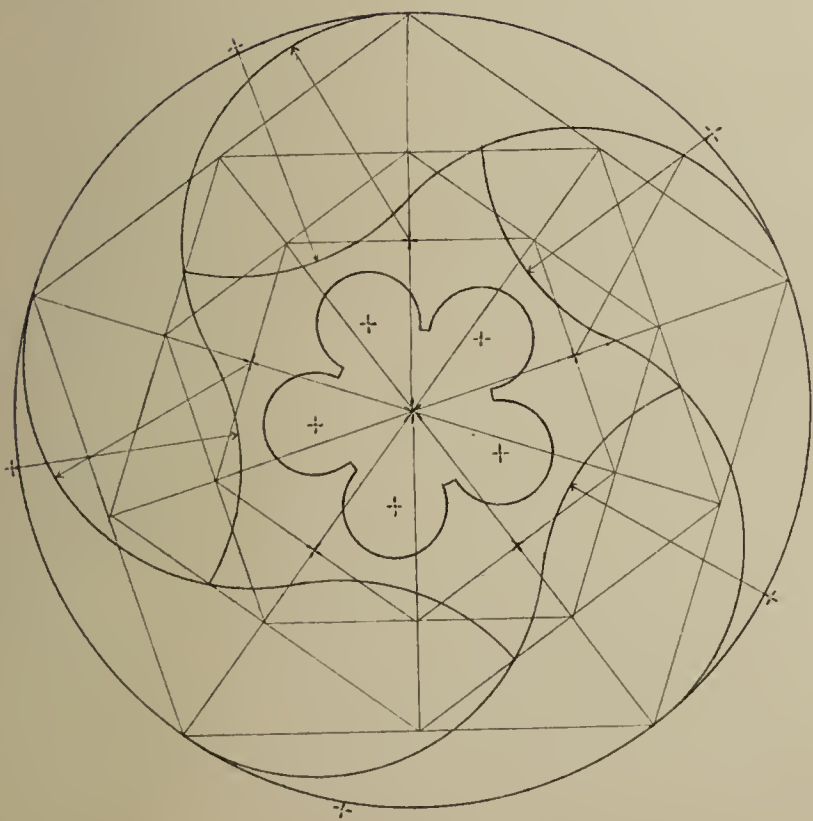
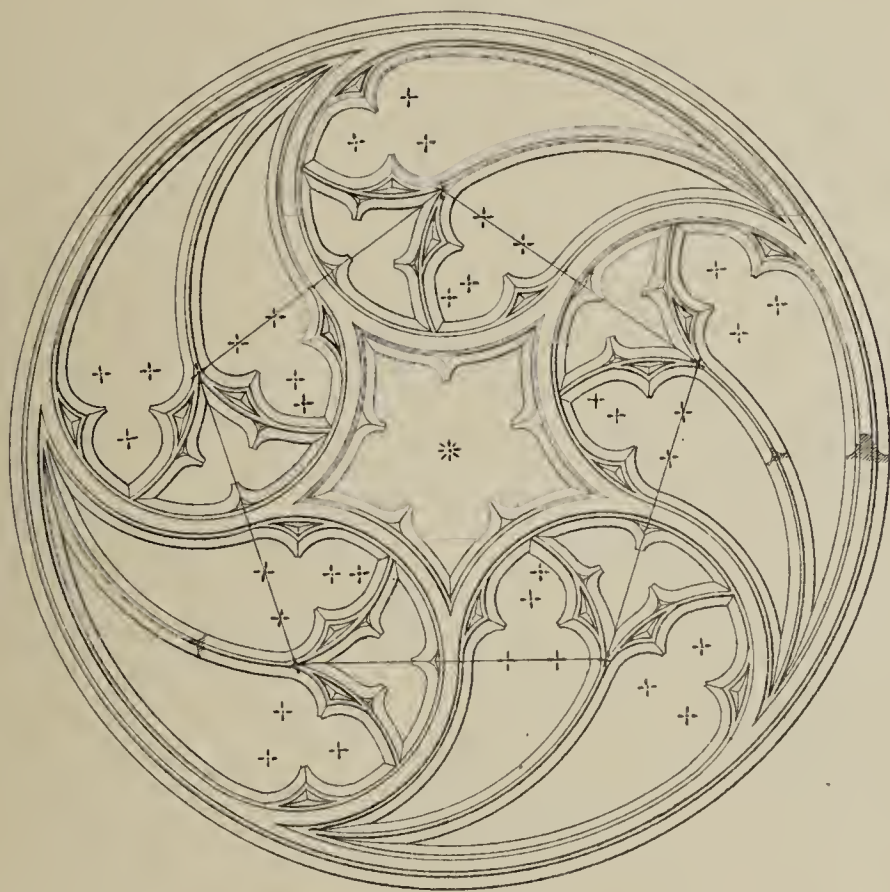
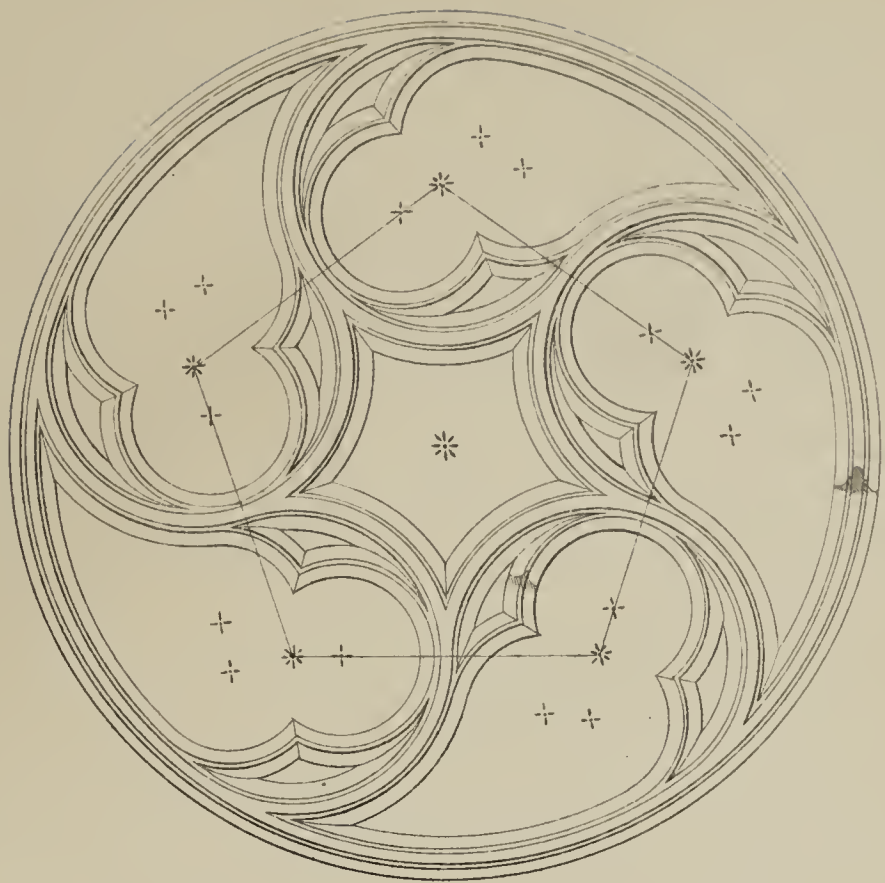
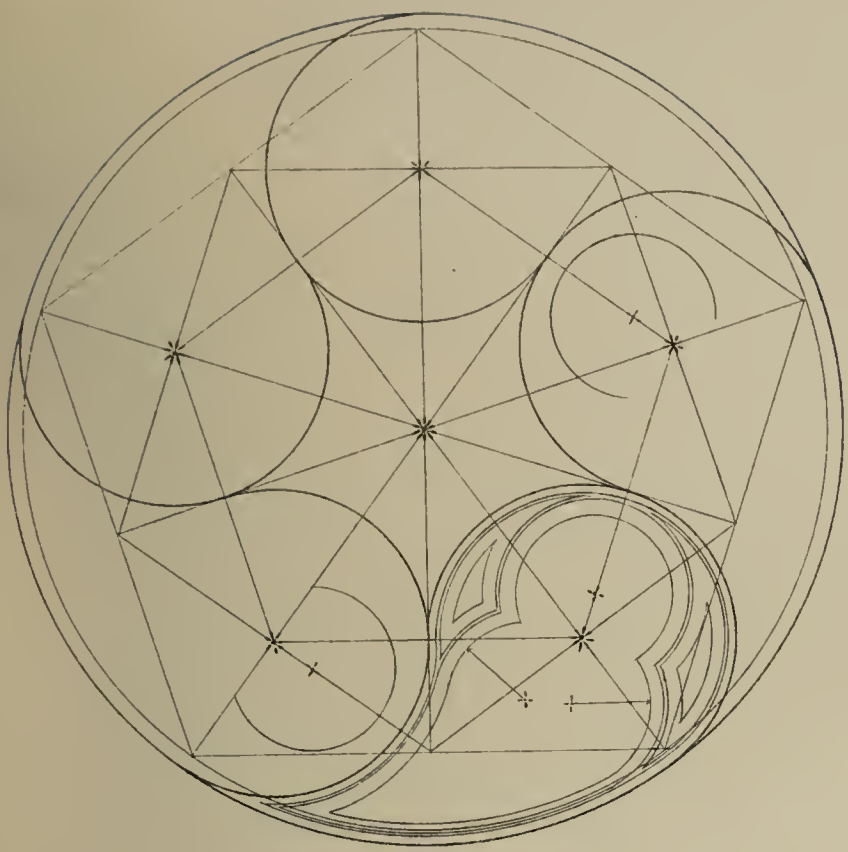




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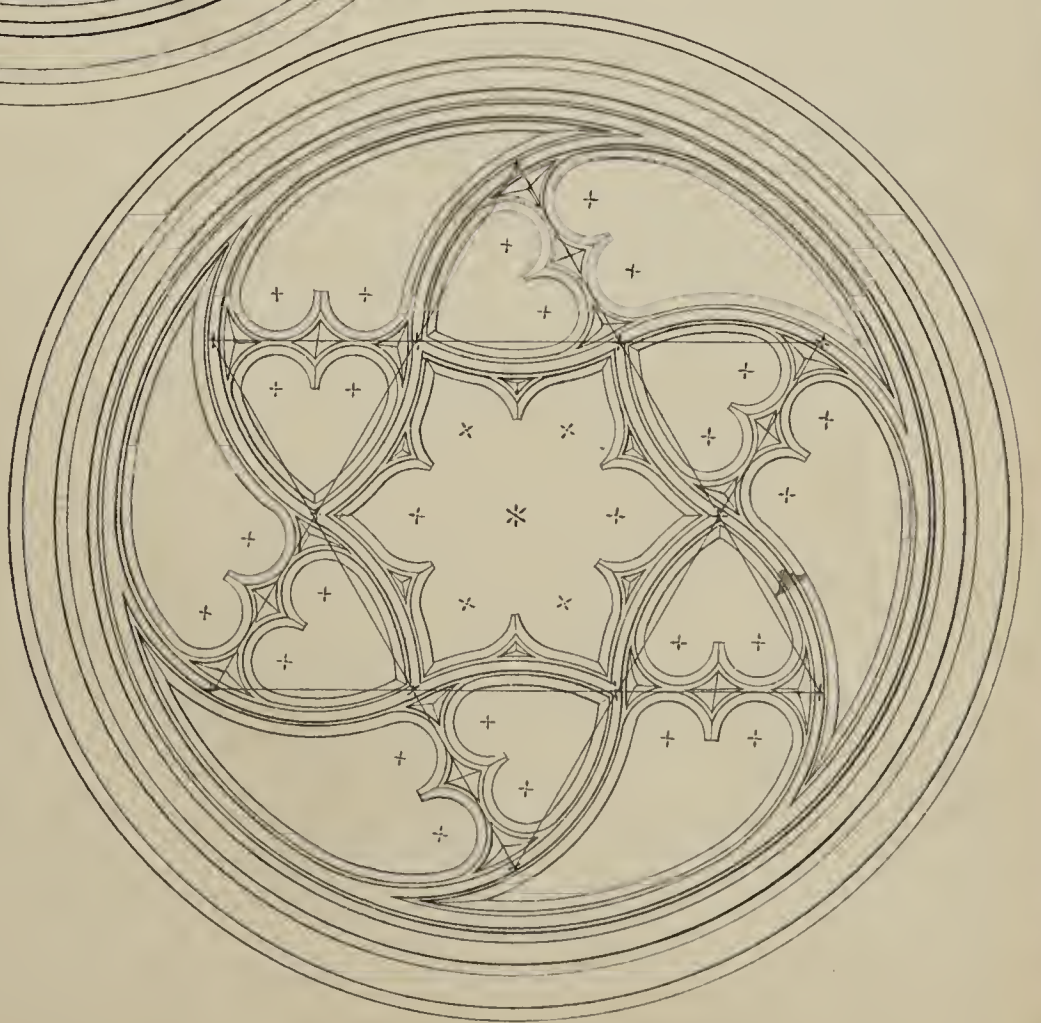
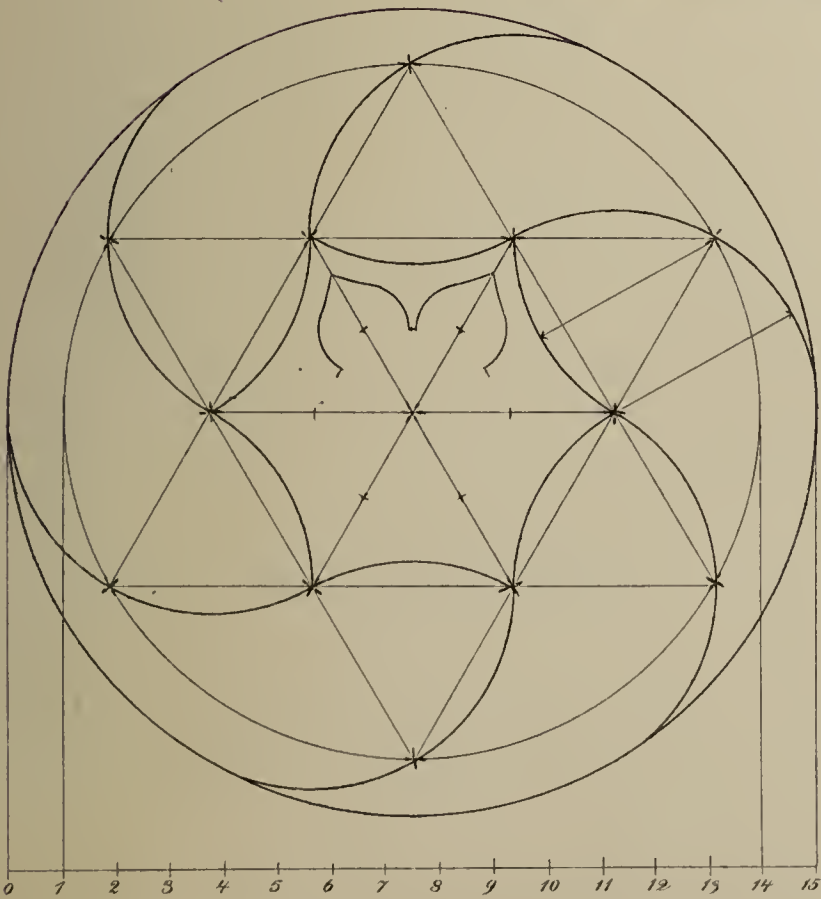
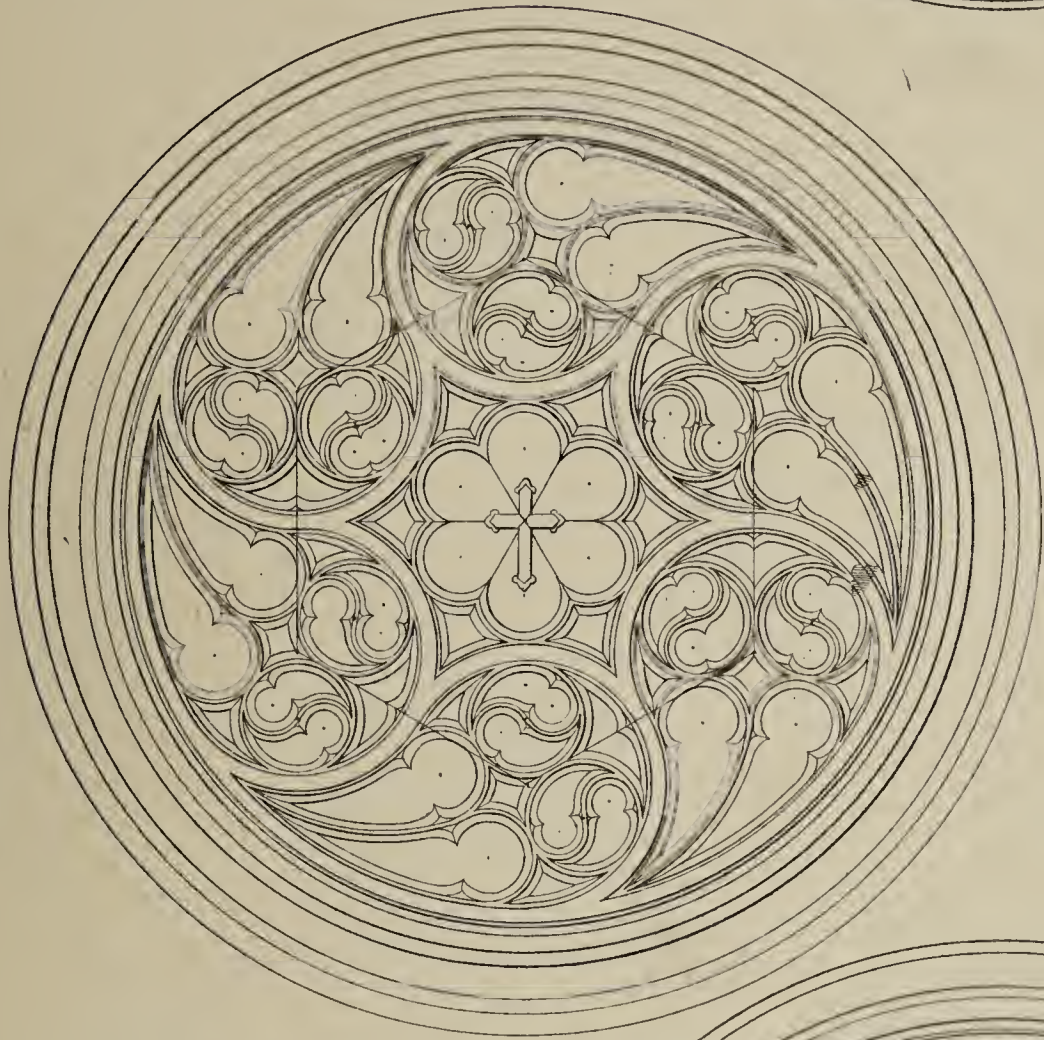
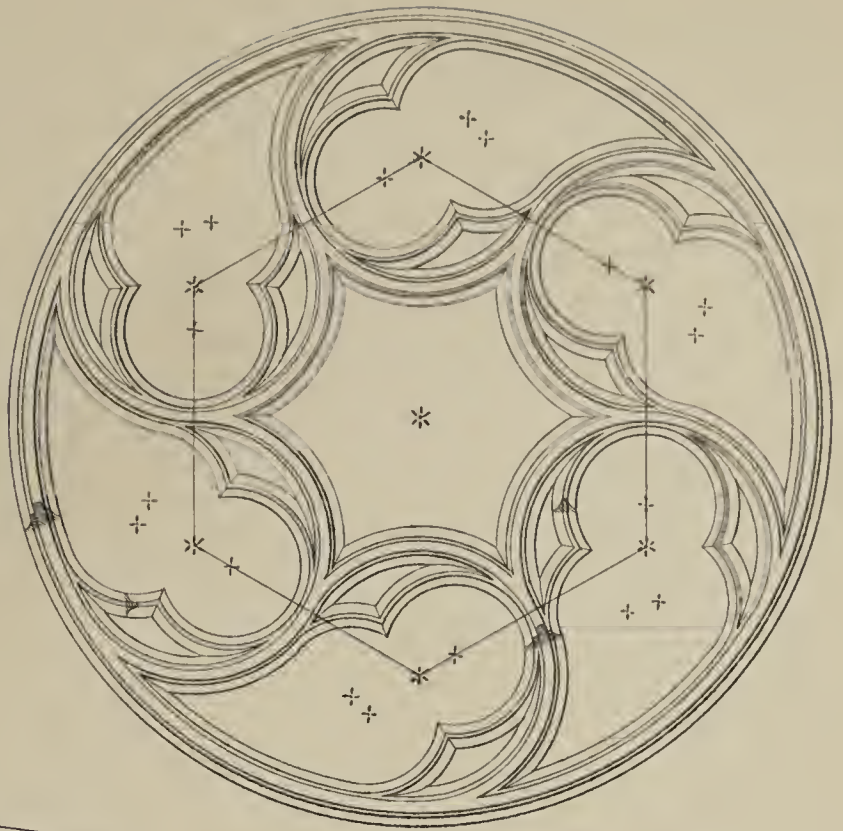
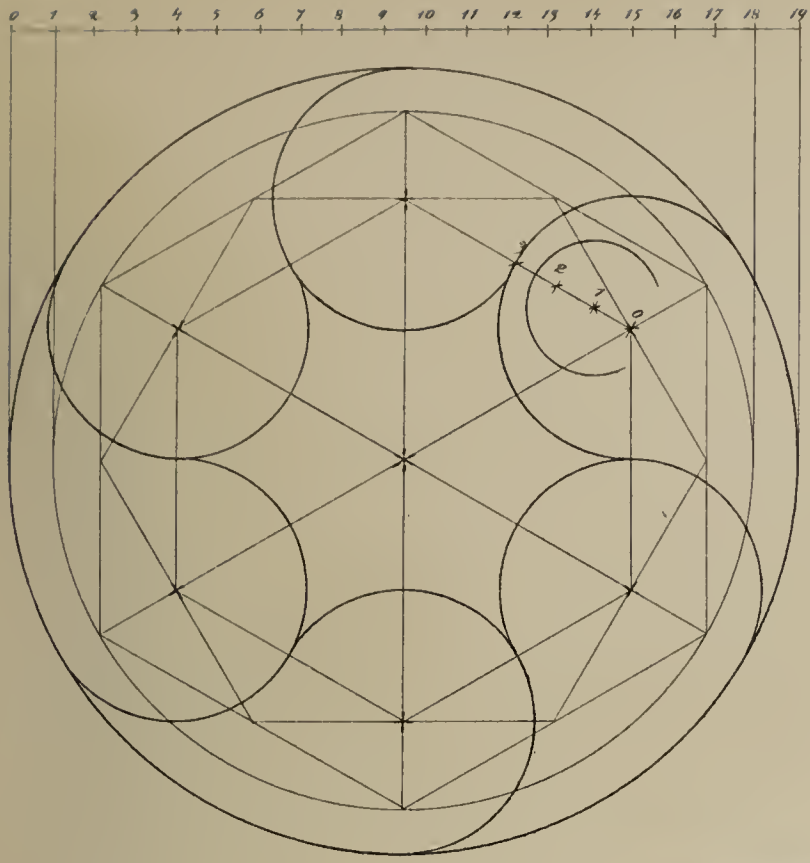




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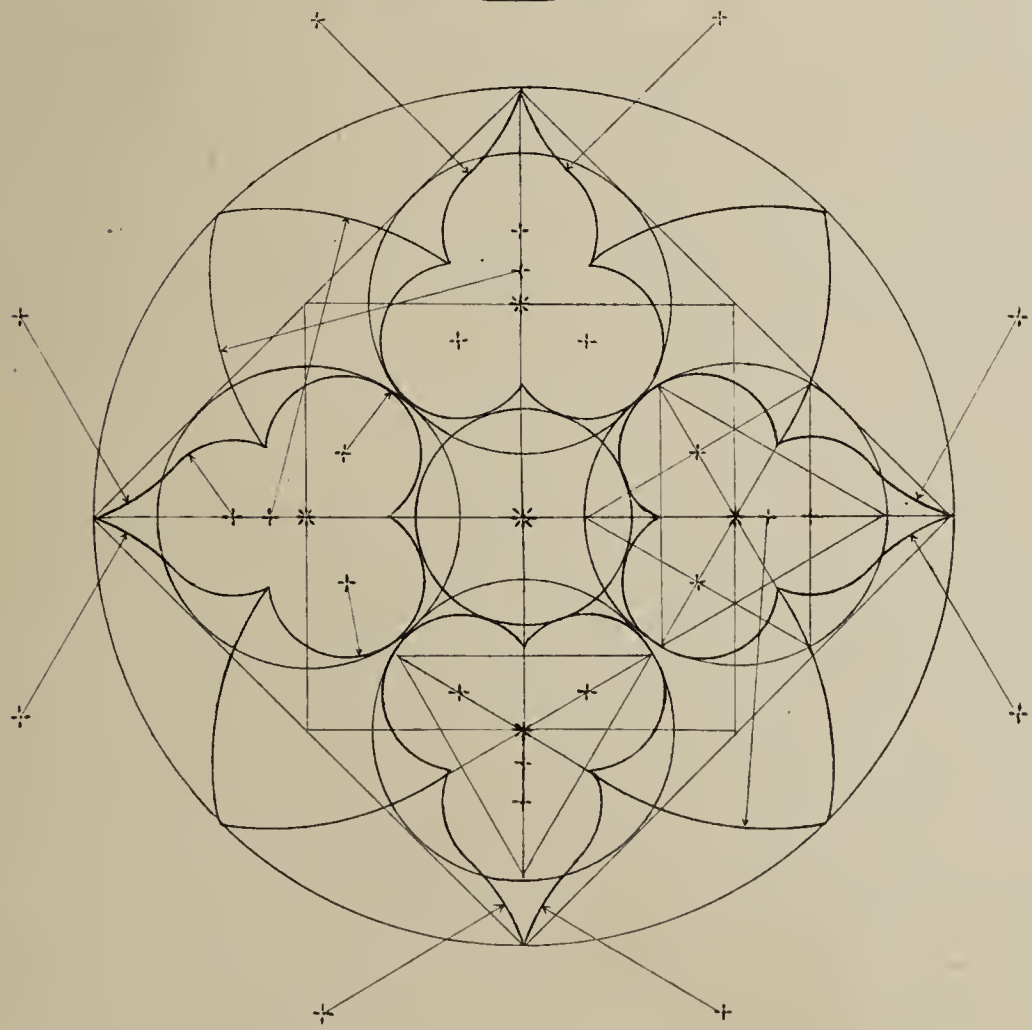
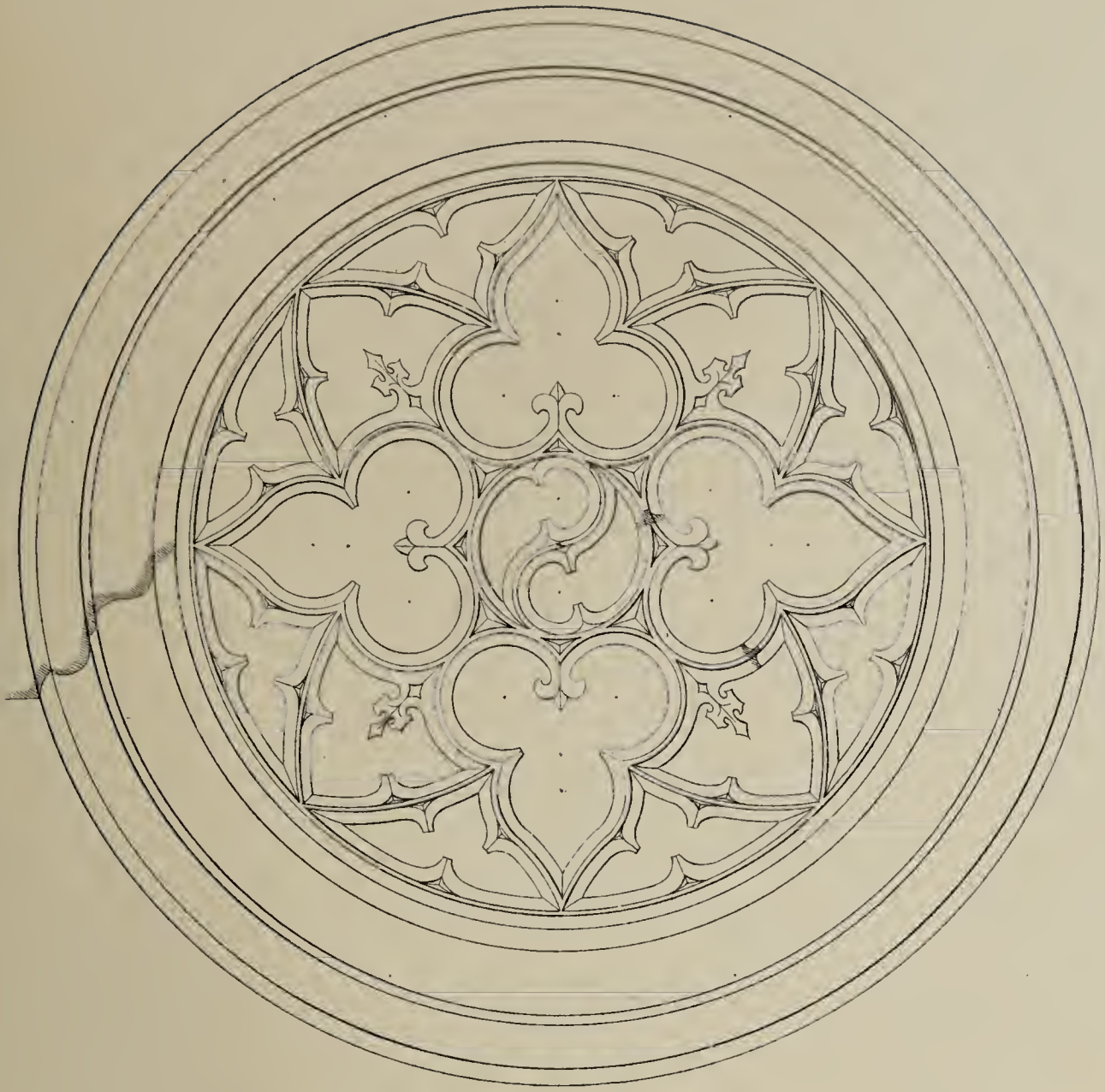




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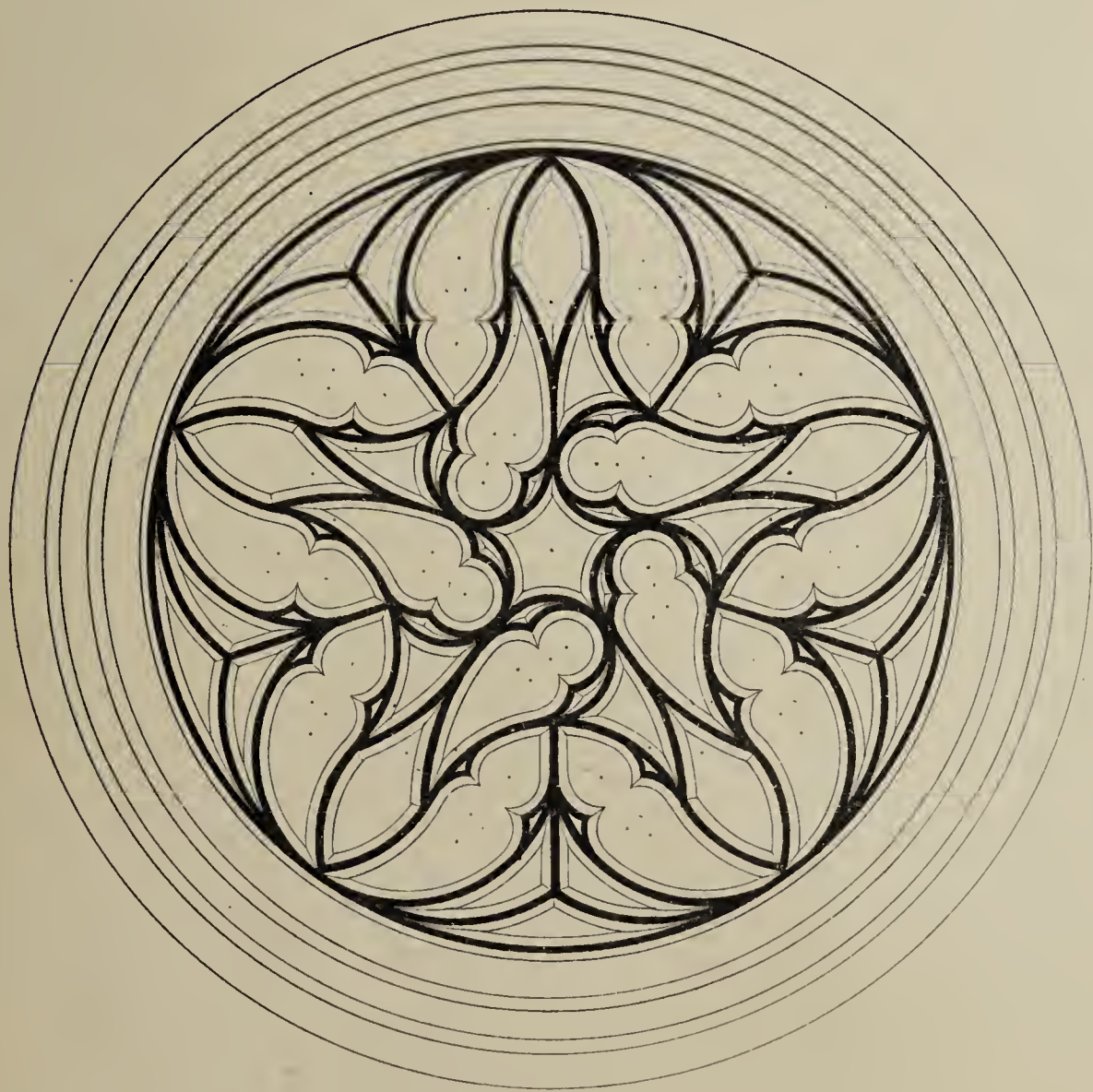
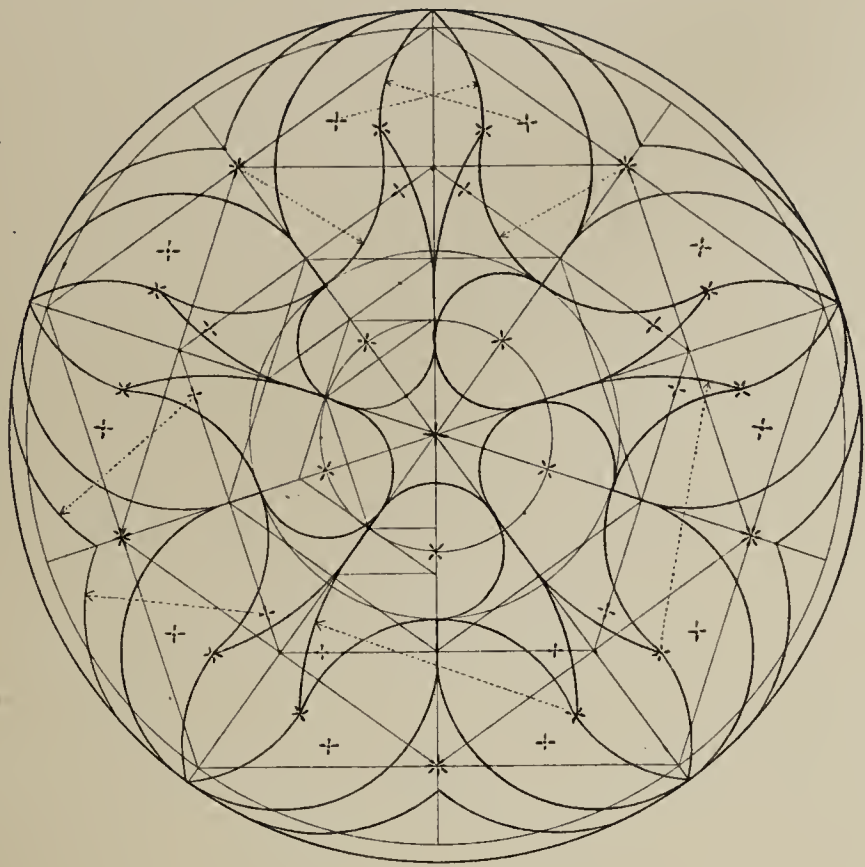




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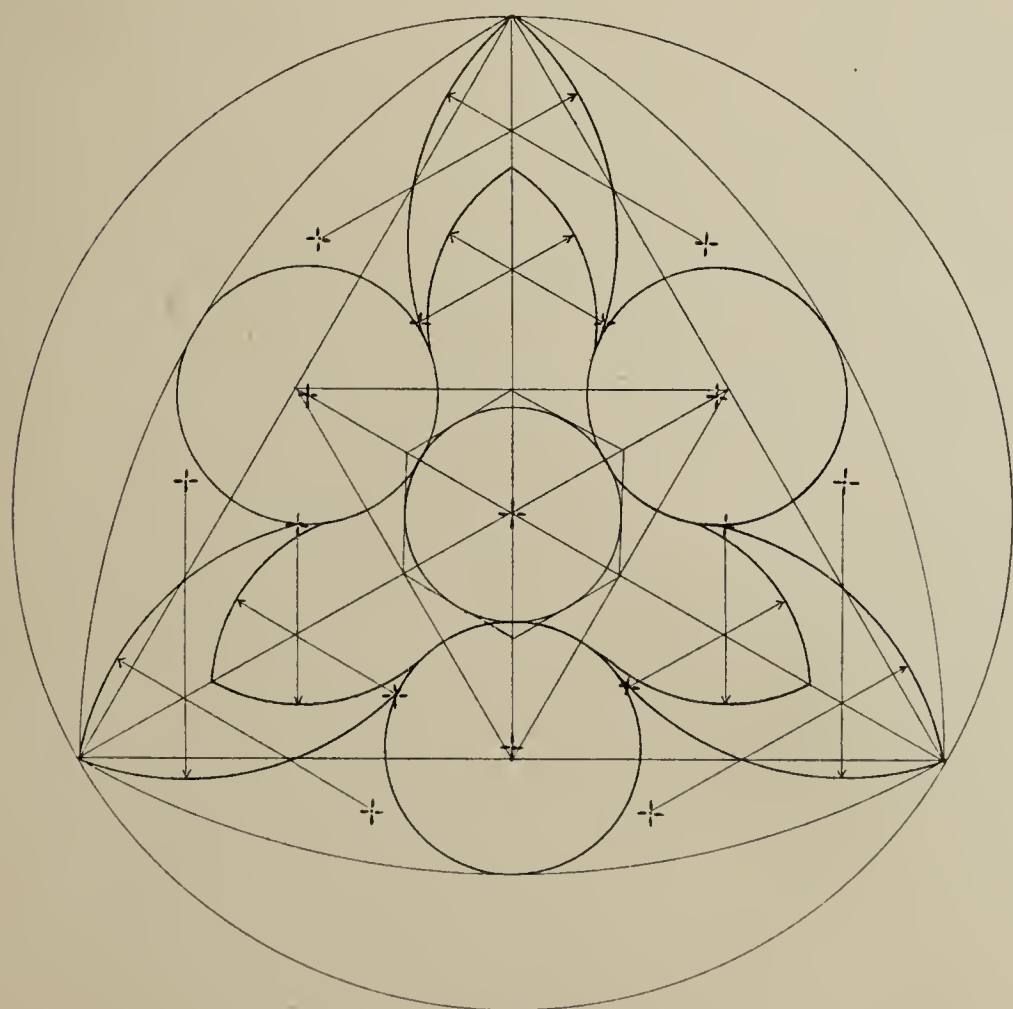
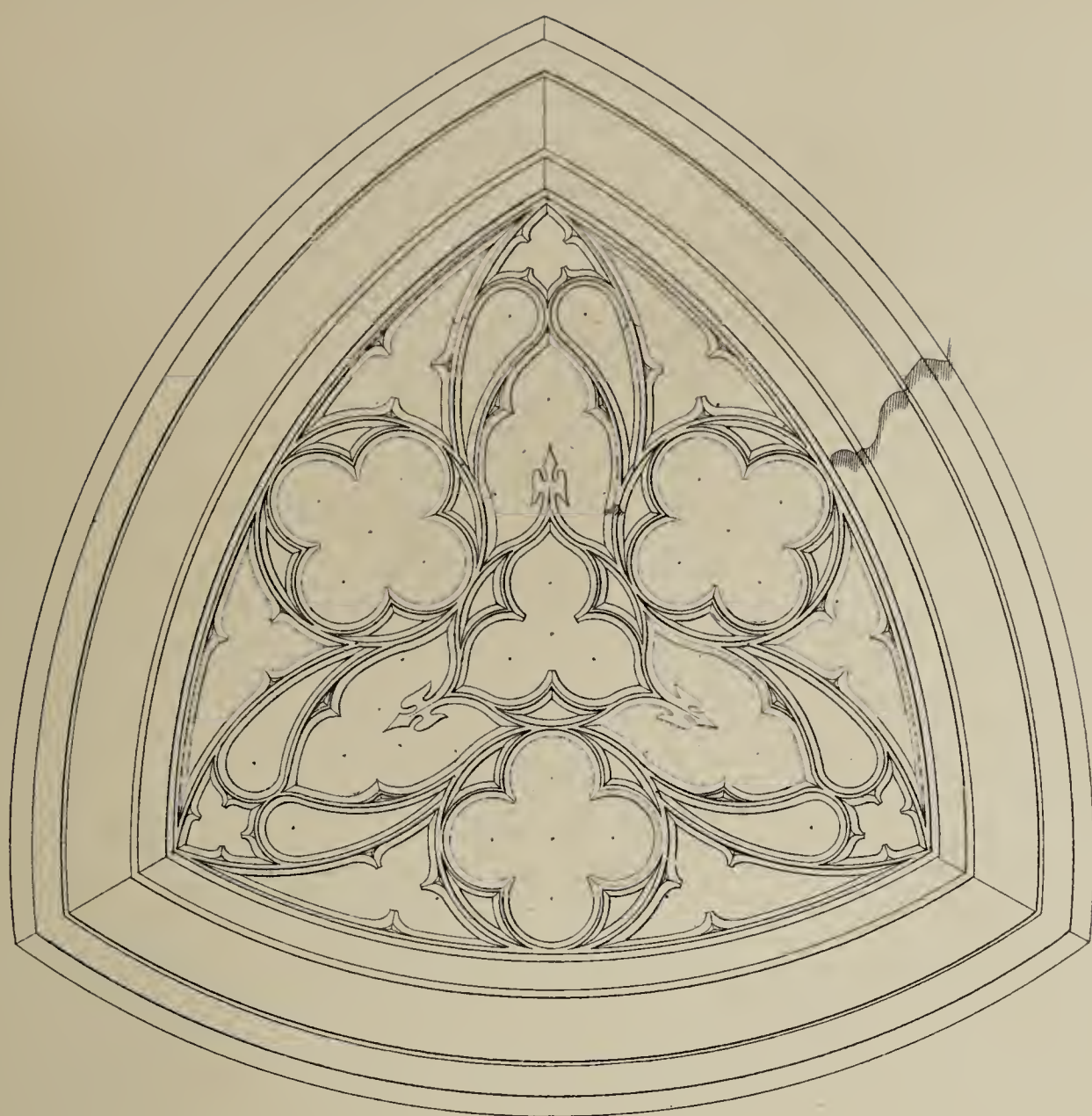




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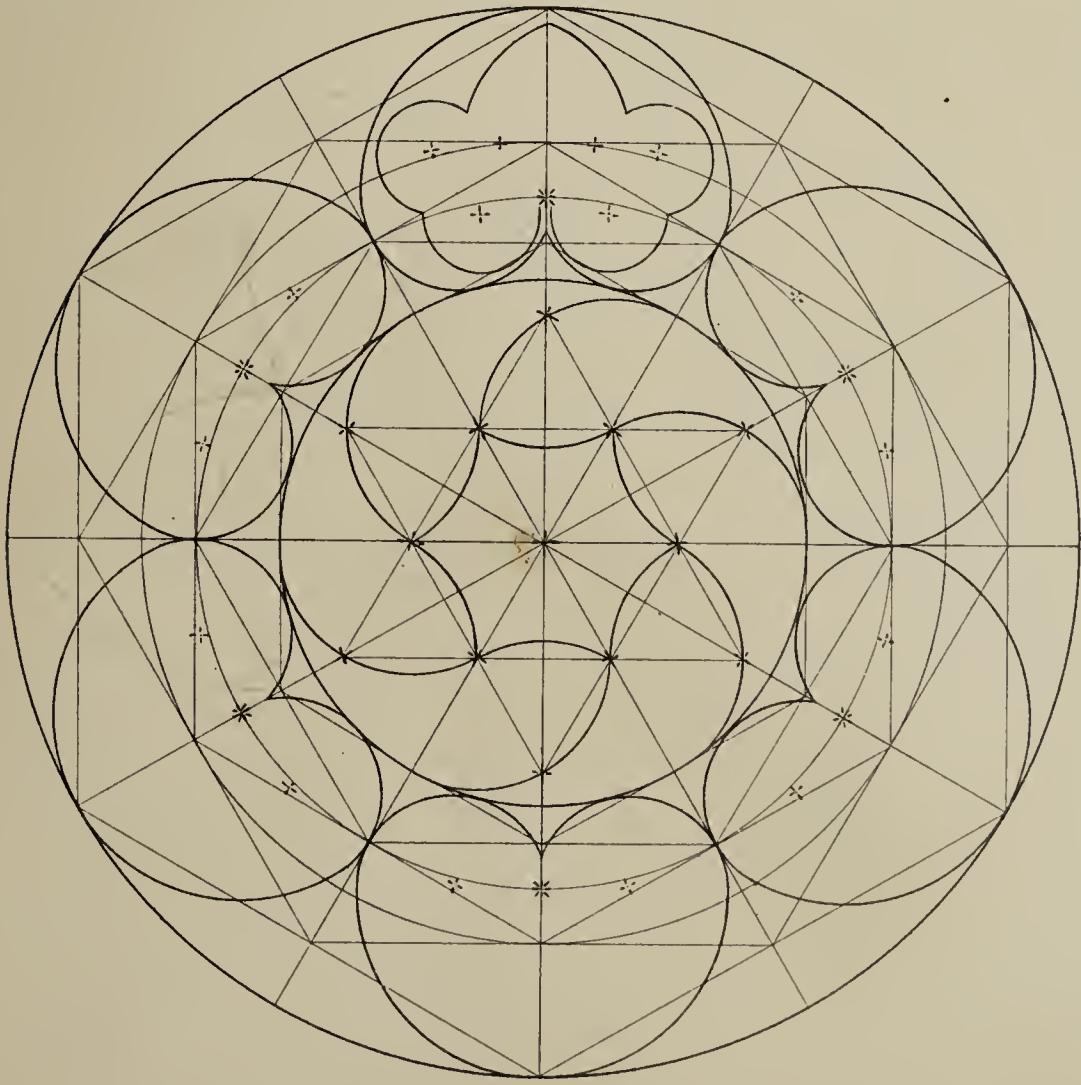
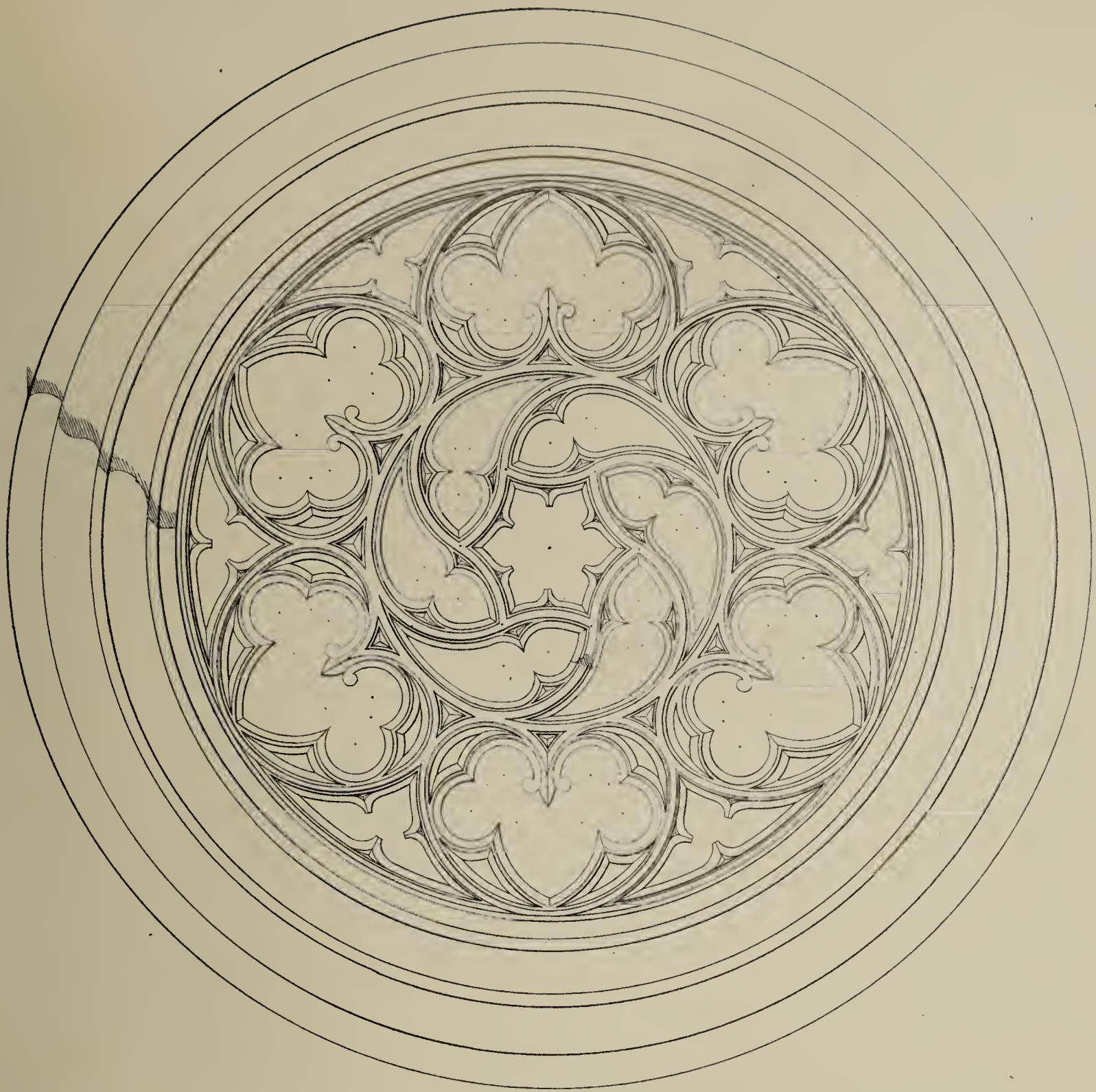




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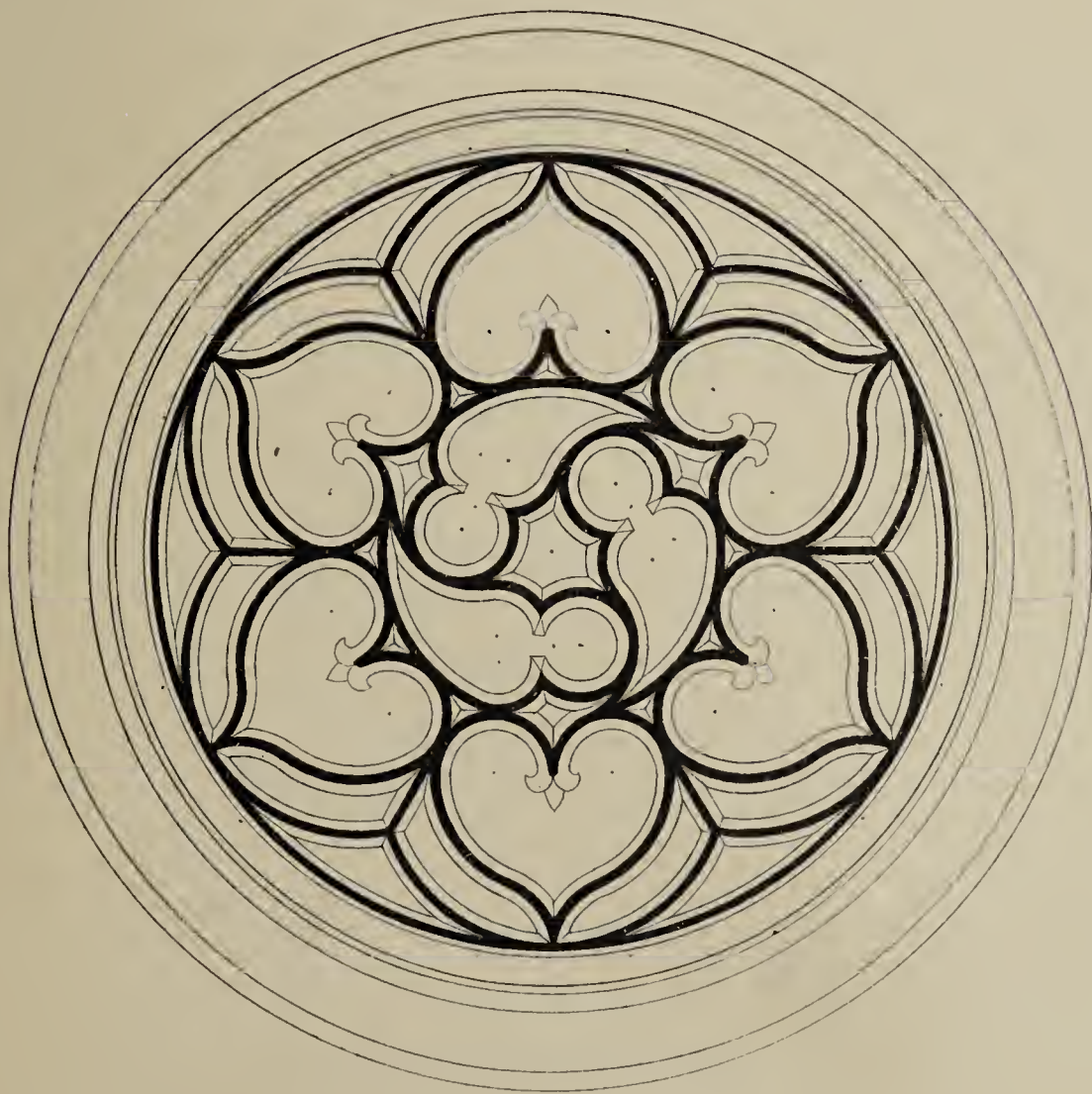
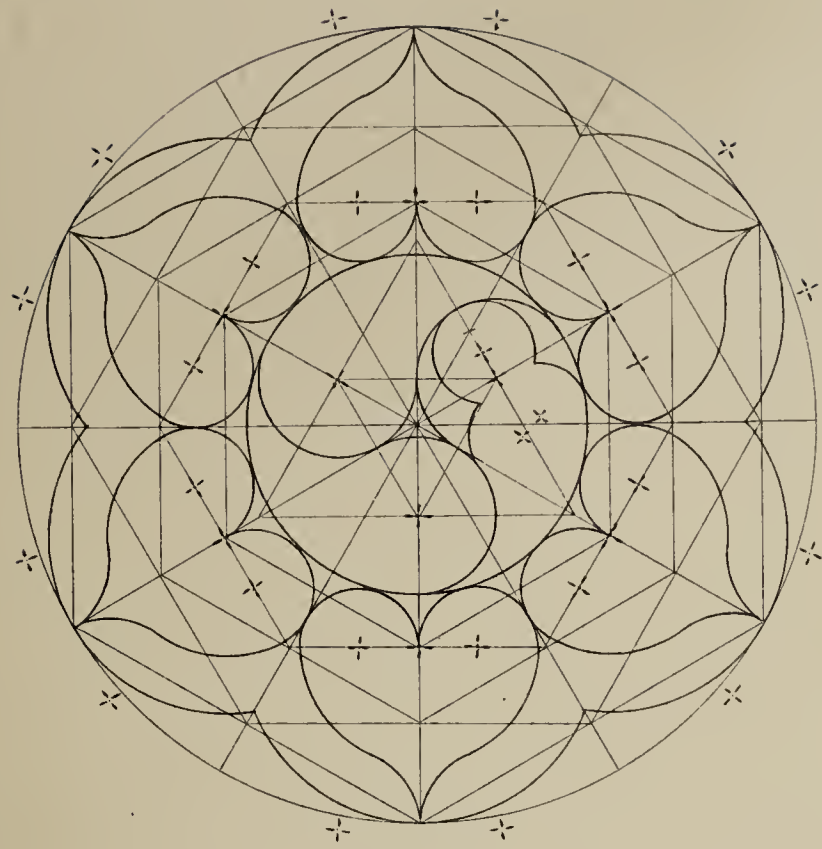




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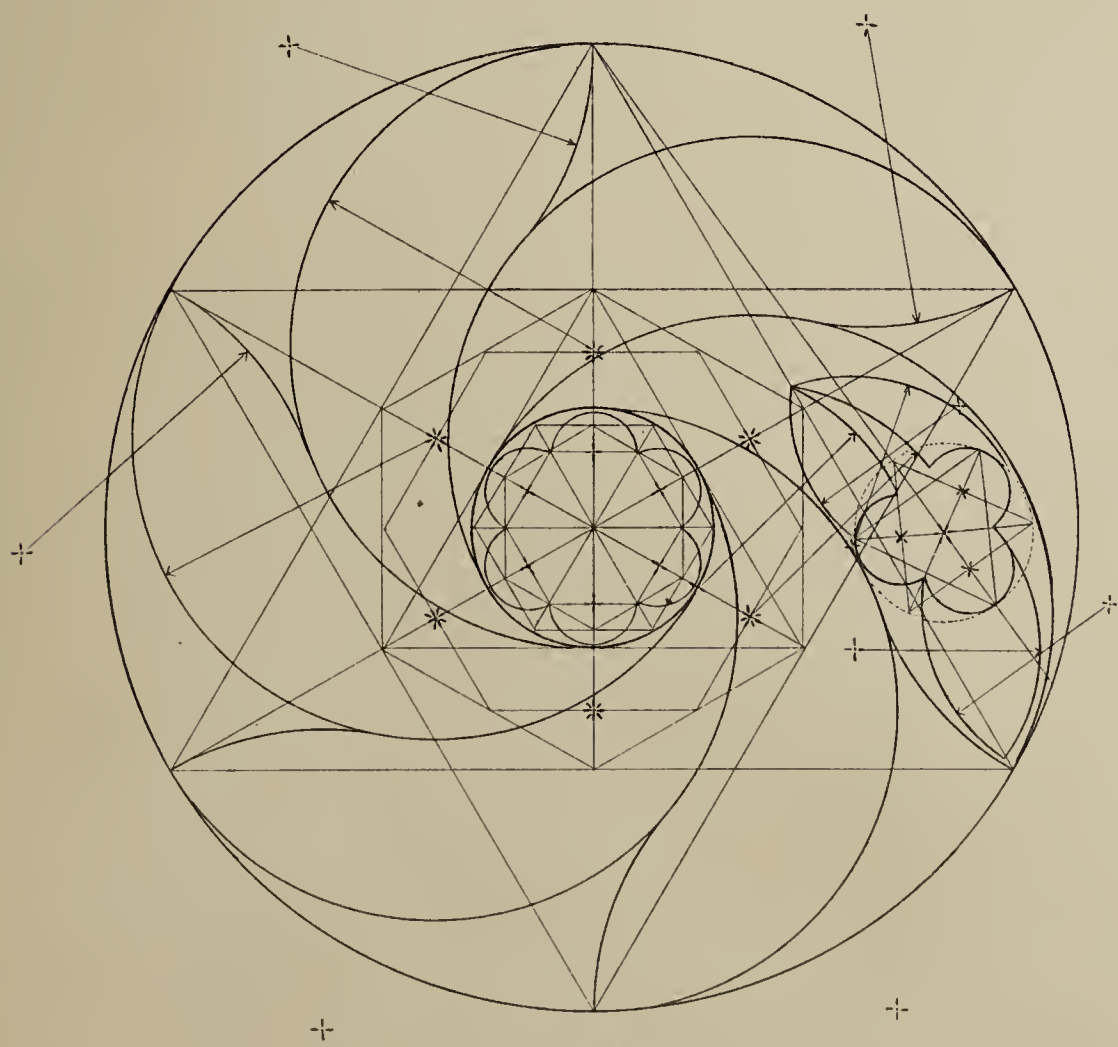
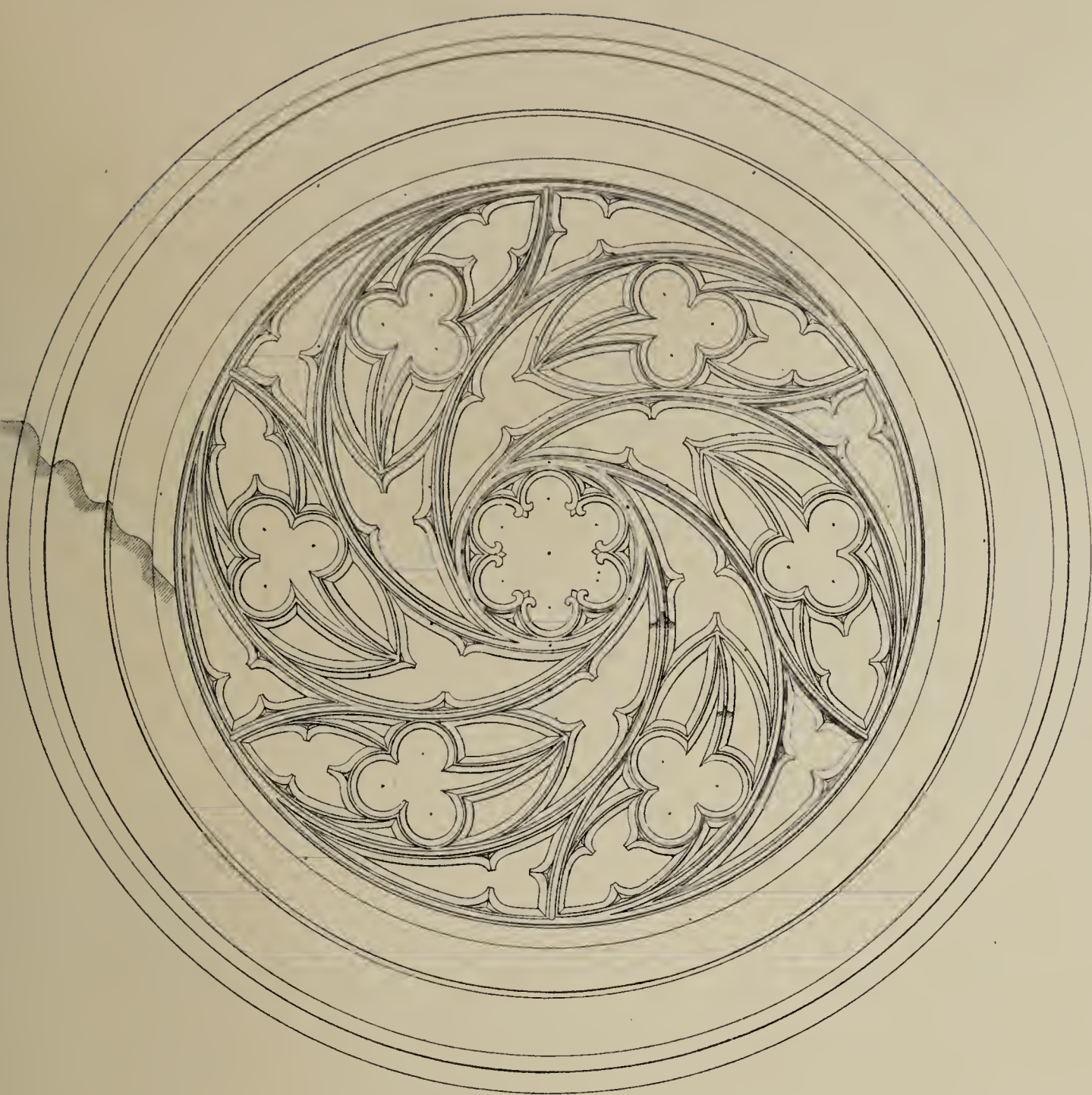




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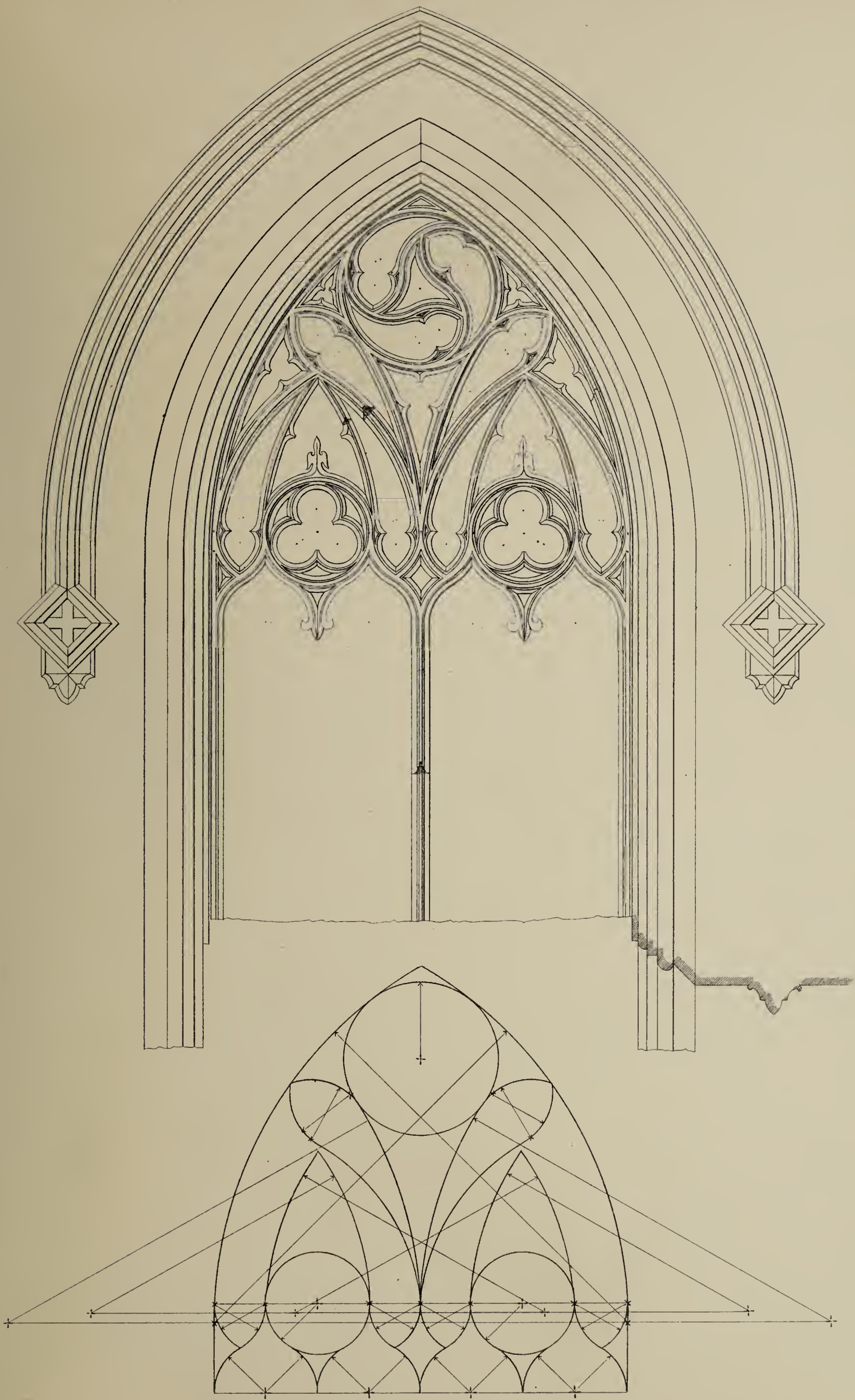




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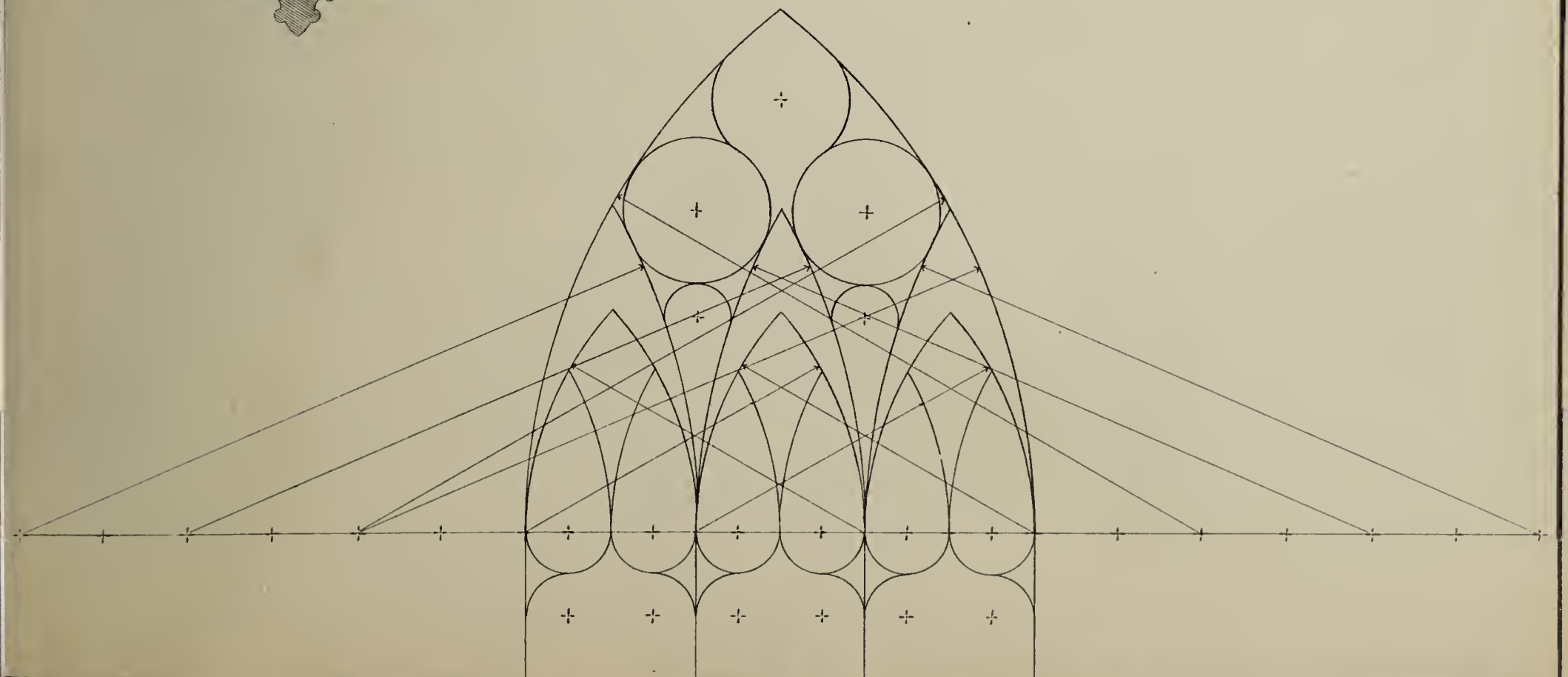




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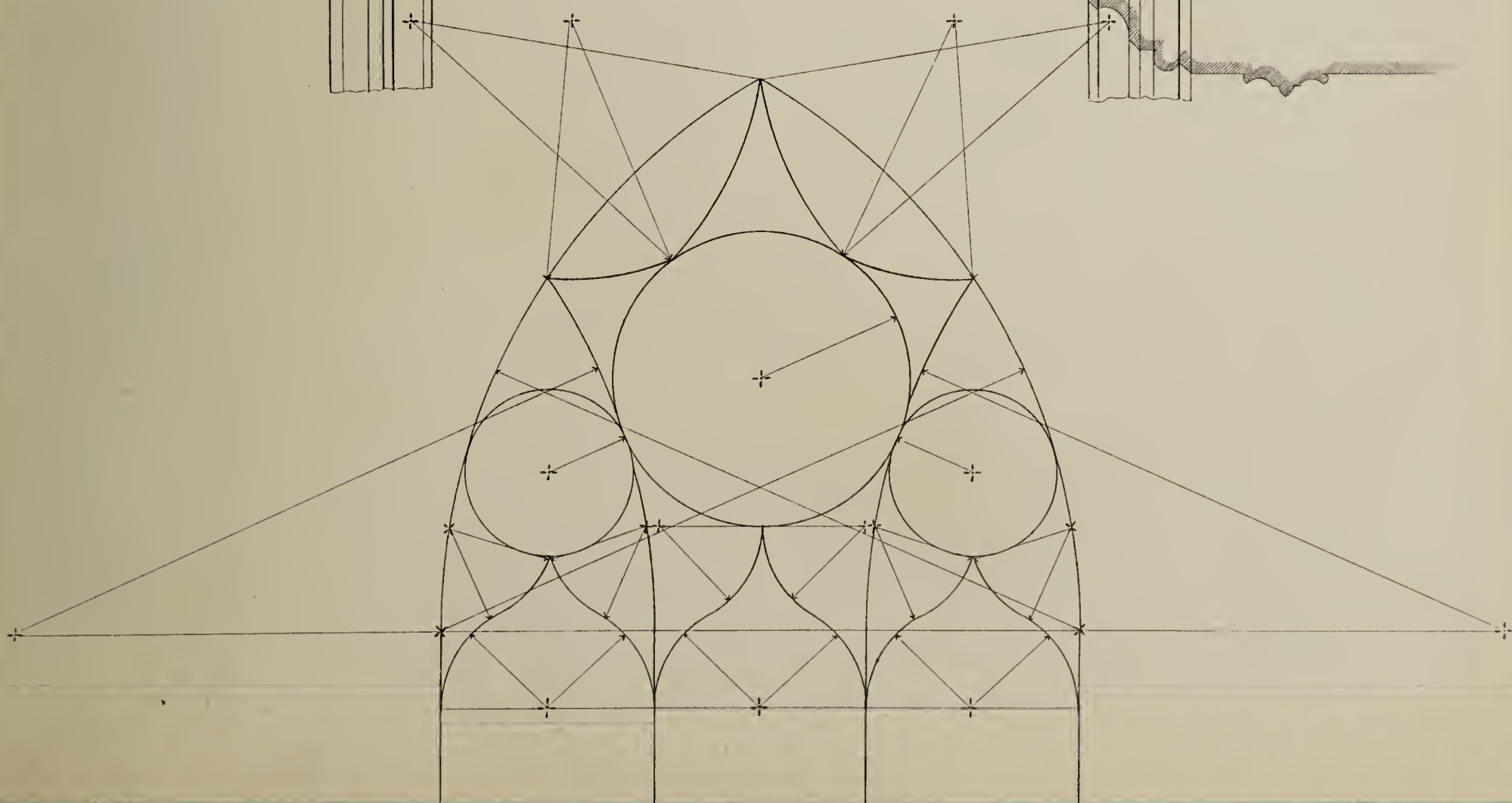
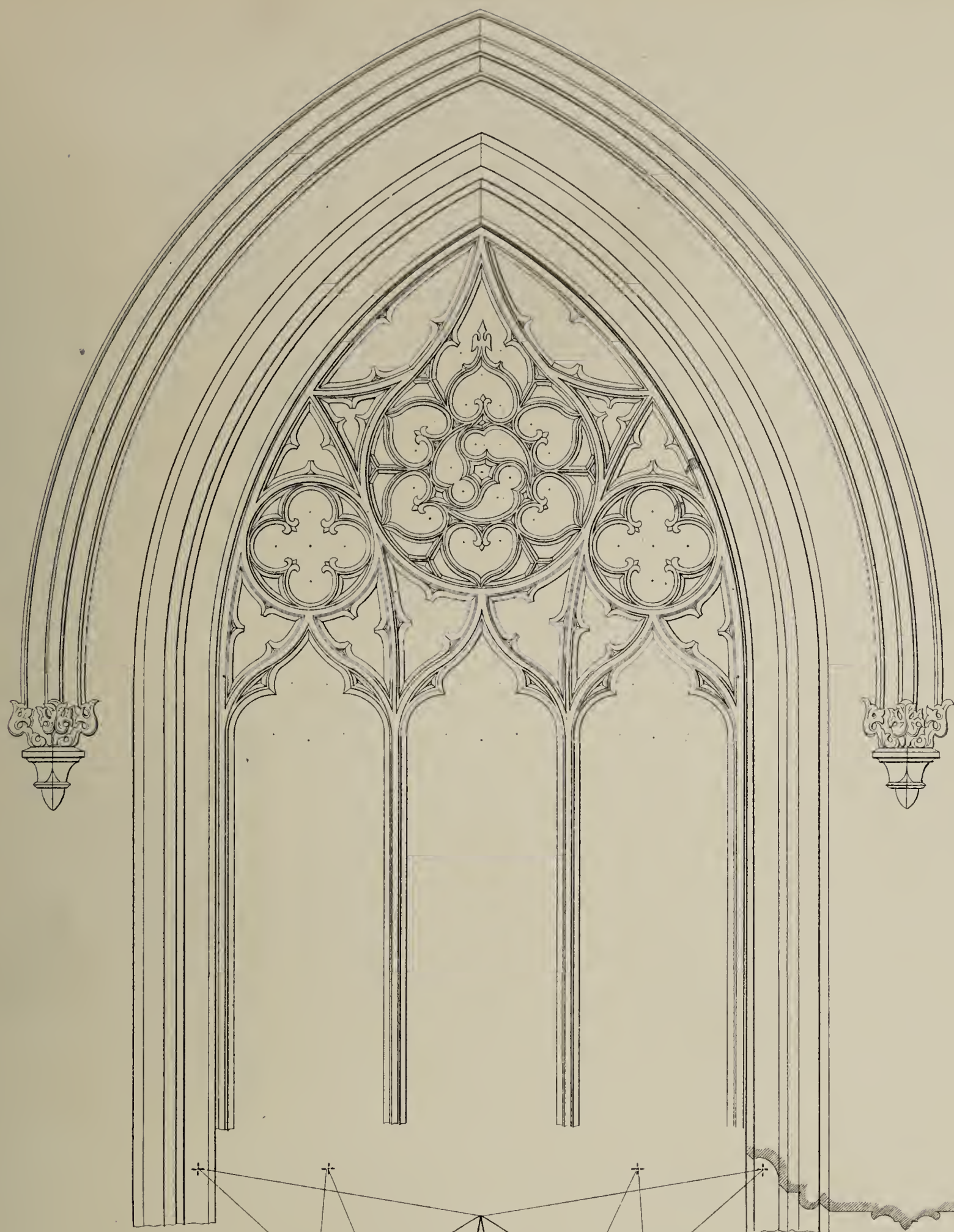




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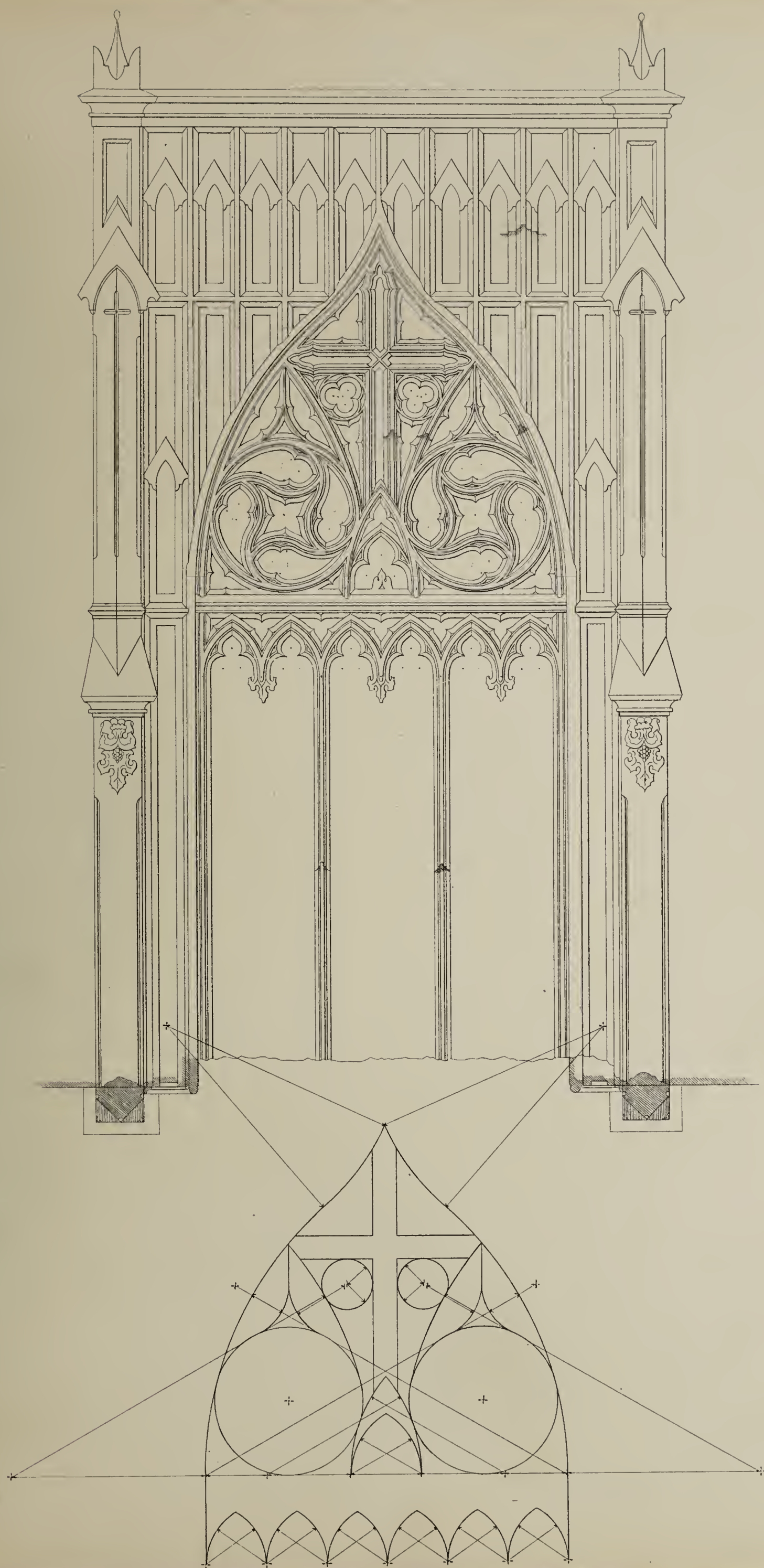




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